



Digester and Thickener Facilities Upgrade Project



Initial Study

August 2015 | File number: PP15-055



SAN JOSÉ/SANTA CLARA REGIONAL WASTEWATER FACILITY DIGESTER AND THICKENER FACILITIES UPGRADE PROJECT

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TABLE OF CONTENTS

CHAPTER 1: INTRODUCTION AND PROJECT DESCRIPTION	1
1.1 Project Title.....	1
1.2 Lead Agency Name and Address.....	1
1.3 Contact Person and Phone Number	1
1.4 Project Location	1
1.5 Project Sponsor's Name and Address.....	3
1.6 General Plan and Zoning	3
1.7 Project Description.....	3
Background	3
Project Overview	5
Project Need and Objectives.....	5
Upgrades and Improvements	8
Process Conversion.....	13
Odor Control	13
Flares.....	13
Demolition	15
Construction Schedule	15
1.8 Other Construction Projects at the RWF	16
1.9 Surrounding Land Uses and Setting	16
1.10 Purpose of this Initial Study.....	16
1.11 Other Public Agencies Whose Approval is Required.....	20
CHAPTER 2: DISCUSSION OF ENVIRONMENTAL CHECKLIST.....	21
A. Aesthetics.....	21
B. Agriculture and Forest Resources	24
C. Air Quality	26
D. Biological Resources	34
E. Cultural Resources	39
F. Geology and Soils.....	42
G. Greenhouse Gas Emissions.....	48
H. Hazards and Hazardous Materials	51
I. Hydrology and Water Quality.....	58
J. Land Use and Planning	64
K. Mineral Resources	65
L. Noise	66
M. Population and Housing.....	68
N. Public Services.....	69
O. Recreation	71
P. Transportation/Traffic.....	72
Q. Utilities and Service Systems.....	76
R. Mandatory Findings of Significance.....	79

CHAPTER 3: CHECKLIST AND REFERENCE SOURCES.....	82
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APPENDIX A.	Mitigation Monitoring and Reporting Plan
APPENDIX B.	Air Quality Technical Appendix
APPENDIX C.	Biological Resource Assessment
APPENDIX D.	Phase I Cultural Resource Assessment
APPENDIX E.	Focused Transportation Impact Analysis

LIST OF TABLES

Table 1-1	Project Improvements	7
Table 1-2	Descriptions of Other Construction Projects at the RWF	18
Table 2-1	Construction-Related Air Quality Project Impacts	31
Table 2-2	Operational-Related Air Quality Project Impacts	32
Table 2-3	Background and Background Plus Project Intersection LOS	76

FIGURES

Figure 1-1	RWF Location and Vicinity	2
Figure 1-2	Layout of the Digester and Thickener Facilities Upgrade Project.....	6
Figure 1-3	Rendering of Digester Upgrades and New Pipe Rack	9
Figure 1-4	Rendering of Improved DAFT Tanks, Thickened Sludge Pumps, and New Polymer Area.....	11
Figure 1-5	Rendering of Process Area 73, Odor Control, and Screening Facility	12
Figure 1-6	View of Existing Two-Flare System and New Location	14
Figure 1-7	Master Plan Projects with Construction Schedules which Overlap the Project Schedule.....	17

CHAPTER 1

INTRODUCTION AND PROJECT DESCRIPTION

1. **Project Title:** Digester and Thickener Facilities Upgrade Project
2. **Lead Agency Name and Address:**
City of San Jose
Department of Planning, Building and Code
Enforcement, Planning Division
200 East Santa Clara Street
Tower, 3rd Floor
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3. **Contact Person and Phone Number:** Ken Davies
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Environmental Services Department
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Meenaxi Panakkal, Senior Planner
City of San Jose
Planning Division
Phone: (408) 535-7895
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4. **Project Location**

Figure 1-1 shows the location of the San Jose-Santa Clara Regional Wastewater Facility (RWF) and the location of the Digester and Thickener Facilities Upgrade Project (Project). The City of San Jose (City) and the City of Santa Clara co-own the facility while the City manages the RWF and associated lands.^a

The RWF is at the southern end of San Francisco Bay, north of State Route (SR) 237, and west of Interstate 880. It is within the northernmost portion of the city, in the Alviso community. A small area (14 acres) in the northeastern portion of the RWF area is in Milpitas.

The RWF property occupies an approximate 2,680-acre area. The main operational area of the RWF, in which the proposed Project is located, totals about 196 acres. Figure 1-1

^a The legal name of the facility remains "San Jose/Santa Clara Water Pollution Control Plant" but beginning in early 2013, the facility's common name was changed to San Jose - Santa Clara Regional Wastewater Facility.



Legend

- RWF Property Boundary
- Residual Solids Management Area
- RWF Operational Area (Project Location)
- Bufferlands
- Salt Ponds A18
- SBWR South Bay Water Recycling
- WPCP Water Pollution Control Plant

Source: Master Plan EIR, Reference 5

Figure 1-1. RWF Location and and Vicinity

also shows the existing uses which surround the RWF. Primary access to the RWF is via Zanker Road-Los Esteros Road, with additional access provided via North 1st Street.

5. **Project Sponsor's Name and Address:** City of San Jose
Environmental Services Department
Contact Person: Ken Davies
Phone: (408) 975-2587
Email: ken.davies @sanjoseca.gov
6. **General Plan Designation:** Public/Quasi-Public¹
Zoning: HI Heavy Industrial²

7. **Project Description**

Background

The current biosolids process train at the RWF includes waste activated sludge (WAS) thickening, digestion of primary sludge and thickened WAS, and use of sludge lagoons and drying beds with final disposition of the dried biosolids at the Newby Island Landfill. This process train has been very cost-effective for the RWF for many years. However, the current system is land intensive, historically been one source of odors in the area, and there is a planned closure of Newby Island Landfill in 2025.

In 2008, the City embarked on a master planning process to rehabilitate and upgrade the RWF facilities. The Plant Master Plan (PMP) was prepared which envisioned a comprehensive Biosolids Management Program (BMP) that would transition from the current process to an enclosed, mechanical treatment system with the resulting dewatered biosolids hauled off-site.³ The BMP also called for flexibility with multiple and diversified disposition options for the biosolids.

In May 2011, in response to community concerns about odors emanating from the lagoons and drying beds, the City Council directed staff to accelerate the biosolids transition process and cease discharging biosolids to the existing lagoons by 2018, followed by emptying the lagoons and drying beds by 2024. The PMP envisioned a three-phase approach that would have decommissioned the lagoons and drying beds by 2030.⁴

The BMP envisioned a mix of Class A and Class B biosolids products. The US Environmental Protection Agency (USEPA) defines the processes and handling requirements of wastewater sludge in terms of "Class A" and "Class B" biosolids products. Class A biosolids, with the highest level of treatment, contain very low levels of volatile material and pathogens and thus lend themselves to safe land application. Class B biosolids, with a lower level of treatment, have a higher level of pathogens than Class A, which places some limitations on the end uses of the sludge. The major project elements recommended for the BMP include:

- Rehabilitation of the existing sludge thickening and mesophilic^b digester facilities;
- Mechanical dewatering for all of the biosolids; with 70% of the biosolids material going to off-site uses and disposal;
- Thermal drying for 20% of the biosolids and greenhouse drying for 10% of the biosolids;
- Decommissioning of the existing open sludge lagoons and drying beds; and
- Multiple disposition options and contracts for biosolids reuse/disposal.

The PMP was adopted by the City and the San Jose Santa Clara Regional Water Pollution Control Plant PMP Environmental Impact Report (EIR) was certified by the City Council in November, 2013 (State Clearinghouse No. 201105207, and City File No. PP11-043), and by the Santa Clara City Council in December 2013⁵. Subsequent to the PMP adoption, a Biosolids Transition Strategy Project was initiated to review the feasibility of diversifying disposition options and to evaluate ways to reduce environmental impacts, use modern technologies for the biosolids processing, and evaluate alternate delivery options for the construction of the facilities (e.g., design-build).

The ongoing Biosolids Transition Strategy Project is under the direction of the Treatment Plant Advisory Committee which reports to the City Council. Ongoing evaluations culminated in the completion of a Biosolids Transition Strategy Report which investigated a variety of issues regarding implementation of the transition from the current biosolids management system to the PMP's recommended system considering changes that have occurred since the technical aspects of the PMP were developed.⁶ It includes both near-term and long-term recommendations for the Biosolids Transition Strategy, taking into consideration the goals identified in the PMP.

One of the recommendations was to change from the current practice of mesophilic digestion to a temperature (thermophilic^c/mesophilic) phased anaerobic digestion (TPAD) process in order to optimize solids stabilization and increase biogas production as discussed below. The TPAD process decision is also driven by creating a low-cost pathway to producing 100% Class A biosolids. The Biosolids Transition Strategy Report also recommended (1) deferring drying processes to some unspecified future date as there is no currently perceived "driver" to invest capital in these processes; and (2) immediate implementation of a mechanical dewatering and dewatered sludge cake load-out facility, thereby allowing decommissioning of the sludge lagoon and sludge drying beds operation.

^b Mesophilic digestion is the most common type of digestion where digesters are operated typically at 95-99°F.

^c Thermophilic digestion is less common and digesters are operated typically at 131-140°F.

Project Overview

The proposed Project is referred to as project number B1796 in the PMP. The proposed Project as well as various other Capital Improvement Projects were not included in the Project Description of the PMP Draft EIR. In general, these projects which are all within the RWF main operations area, involve repair or replacement of existing plant facilities and equipment and were intended to undergo separate environmental review pursuant to CEQA.

The Project is envisioned as the backbone of a major anaerobic digestion process conversion at the RWF. Components of the Project, which are discussed below include upgrades and improvements to the anaerobic digesters, dissolved air flotation thickeners (DAFTs), and digester gas system; conversion of the current mesophilic digestion process to a TPAD system; odor control system; and replacement of existing flares.

With the TPAD system, digesters 5-8 will be upgraded and operated as thermophilic digesters and the remaining digesters as mesophilic digesters. With the phased TPAD system, thickened solids will first go to first-stage thermophilic digesters to be followed by the second-stage mesophilic digesters. This conversion will enable high loadings per vessel, provide greater stabilization of volatile matter, produce more digester gas energy, produce a product with very low pathogenic organism content, and reduce expensive upgrades to the remaining digesters.

Figure 1-2 shows the layout of the main Project components while Table 1-1 lists the specific improvements for each Project component. Sources of information for the discussion include the Conceptual Design Report,⁷ the Preliminary Design Report,⁸ and the 60 percent design submittal.⁹

Project Need and Objectives

The Project is the initial phase of a comprehensive upgrade to the RWF biosolids processing facilities. The PDR identified that the existing digesters and DAFT units are aged, in various states of disrepair, and in need of rehabilitation in order to maintain viable biosolids processing capacity. The Project will reduce the ultimate number of facilities requiring rehabilitation and include the necessary improvements and upgrades to complete a major anaerobic digester process conversion at the RWF. The following objectives have been identified for the Project:⁸

- Initiate a complete renewal of the RWF sludge and biosolids handling facilities.
- Reduce the number of digesters and DAFTs requiring rehabilitation.
- Process more solids and less water in the biosolids process train by rehabilitating and reconfiguring DAFT 1-6 to thicken a combined stream of PS and WAS to a target total solids concentration of 5.5% with a reduction in water processed.
- Reduce debris in the thickening, digestion, and potential future dewatering process.



Source: Brown and Caldwell April 2015 and Reference 8.

Figure 1-2. Layout of the Digester and Thickener Facilities Upgrade Project

Table 1-1. Project Improvements

Project component	Improvements
DAFT upgrades (Upgrade of six existing units and new associated equipment and ancillary facilities)	<p>New primary sludge (PS) screening facility to remove debris prior to the blend tanks and DAFT tanks</p> <p>Polymer storage and application facilities as a thickening aid</p> <p>Upgrade to pressurized water feed and saturation tanks to dissolve higher quantities of air to use in DAFT tanks</p> <p>Replace collector mechanisms in the DAFT tanks</p> <p>Cover six DAFT tanks to contain odor, route foul odor to odor treatment system</p> <p>New thickened sludge (TS) feed pumps to convey TS from the DAFT to the digester feed system</p>
Digester 5-8 upgrades (Upgrade of four existing digesters and new associated equipment)	<p>New thickened sludge equalization (TSE) tanks to receive TS from the DAFTs and to serve as the control point for a new digester feed loop</p> <p>Equip each digester with a dedicated feed pump to allow for continuous feed to each tank</p> <p>Replace steel floating covers with “submerged” concrete fixed covers</p> <p>Provide a dedicated standpipe to manage individual digester discharge and pumping to 2nd stage digesters (existing).</p> <p>Provide new confined gas mixing equipment</p> <p>New heat loop to provide heating water for the digesters</p> <p>New cooling water system to cool thermophilic sludge before entering 2nd stage mesophilic digesters 9-16</p> <p>Structural reinforcement around the base of each of the digesters</p>
Digester gas system improvements	<p>Remove hazardous piping from tunnels adjacent to the digester areas and install these on an above-grade pipe rack</p> <p>Pipe rack to be used for digester gas and other utilities and will extend from digesters 9-16 to the secondary blower building</p>
Odor control	<p>New one-stage biotrickling filter-activated carbon absorber system with the biotrickling filter for the rehabilitated DAFTs, and the activated carbon for serving the screening bins.</p>
Flare	<p>New flare system with enclosed and candlestick types flares</p> <p>Modify and improve existing flare system to serve as redundant backup system</p>

Source: Preliminary Design Report, reference 8.

- Improve efficiency of digesters feed to allow smooth, even digester gas production.
- Provide a digestion process that can accept higher loadings per vessel, provide greater stabilization of organic matter, produce more digester gas energy, and produce a product with very low pathogenic organism counts.
- Provide digester vessels with optimized volume, efficient mixing, and managed removal of scum and floatable matter.
- Remove hazardous, digester gas piping systems from the RWF tunnels.
- Provide flexibility for a diversified disposition strategy for biosolids in the future.
- Reduce fugitive gas emissions and provide odor control for the rehabilitated DAFTs and associated facilities.
- Provide a new flare system in order to continually meet operational and reliability requirements of the digester gas system.

Upgrades and Improvements

The RWF has a campus of 16 anaerobic digesters which are fed PS directly from the primary sedimentation tanks, and biological WAS after it has been thickened in DAFTs. Sludge is currently fed to the digesters at a total solids concentration typically in the range of 3 to 4%. In order to reduce the number of digesters that will ultimately require rehabilitation, the Project includes a reconfiguration of the DAFT process area to accomplish co-thickening of PS and WAS to a target concentration of 5.5%. This will reduce the quantity of water that has to be heated and processed in the digester vessels.

According to the PDR, it is anticipated that nine digesters will ultimately need rehabilitation to serve projected 2030 loads. In this initial phase, the Project provides for upgrades to digesters 5 through 8 only. Digesters 5 through 8 are currently, and will remain, out of service through the construction period. Once the Project is completed, digesters 1 through 4 will be abandoned. Upgrades to remaining digesters will be completed in the future. Figure 1-3 is a rendering showing the digester upgrades and the new pipe rack covering the area.

Digesters 5 through 8 are reinforced concrete vessels with steel floating covers which allow fugitive gas emissions and odors to escape from the space which exists between the cover and digester tank sidewalls. The digesters will be upgraded by replacing the steel floating covers with “submerged” concrete fixed covers. Submerged-cover digesters are designed to operate completely filled at all times. Eliminating the existing space between the covers and vessel sidewalls as well as any fugitive gas emissions and odors. The concrete fixed covers will be supported by eight columns each; the columns will be founded on a thickened mat foundation poured on top of the existing digester floor. The existing digester walls will be retrofitted to resist the new design loads, including current code seismic loads. All equipment that feeds sludge to the rehabilitated digesters, heats sludge to the digesters, mixes sludge in the digesters, and withdraws sludge from the digesters will be replaced with new equipment (Table 1-1).

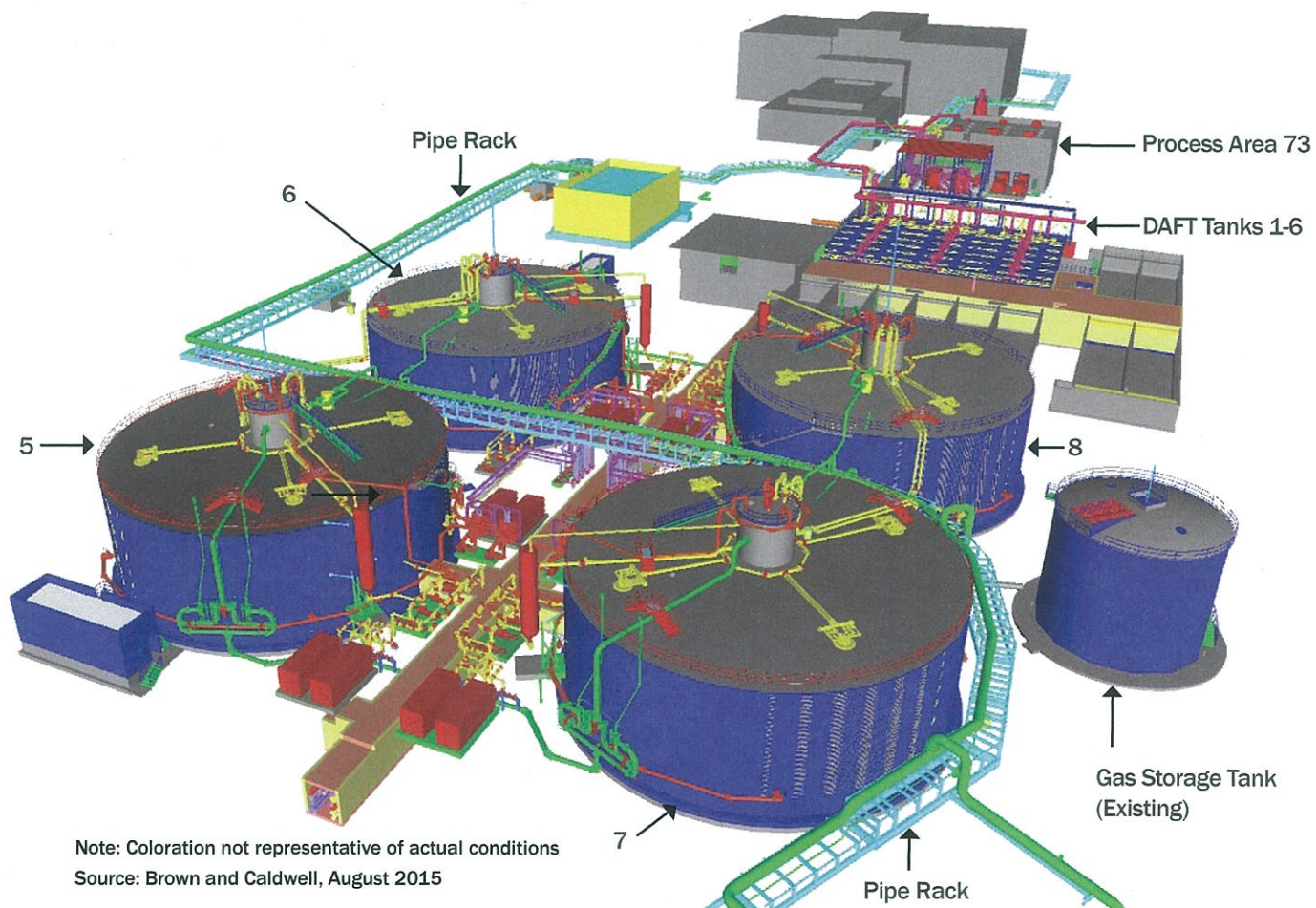


Figure 1-3. Rendering of Digester 5-8 Upgrade and New Pipe Rack

Currently, digester gas collection piping for the entire digester campus is routed through the RWF tunnel system. The tunnel system is large enough to accommodate the gas piping and RWF workers. This has been identified as a potentially unsafe condition given the current design of the tunnels and condition of the piping. The existing configuration is not in conformance with industry guidelines for prevention of explosions and fire. Accordingly, the Project provides for construction of an external, elevated pipe rack to collect digester gas from the entire digester campus. This Project component will allow removal of low-pressure gas piping and some other hazardous systems from the tunnels as the first step toward “declassifying” the tunnel system as a potentially hazardous environment. The pipe rack will be used for other utilities in addition to digester gas.

As shown in Figure 1-2, the above-grade pipe rack will extend from digesters 9 through 16 to the west side of the blower building, distance of about 3,200 feet. The pipe rack will be elevated from about 15 feet to over 17 feet depending on pipe rack location as well as required clear height for internal RWF roadways. The main pipe rack will consist of single concrete columns supporting a steel pipe rack (Figure 1-3). Horizontal steel beams with cross bracing/struts will span between each concrete column and provide intermediate supports for the various piping. For the laterals, the pipe rack will be an all-steel structure consisting of vertical columns and lateral bracing. The foundation types will be determined in final design and likely will include spread footings, concrete piers, and micropiles.

The RWF has 16 rectangular DAFT units, but reconfiguration to co-thickening and modernization of associated process equipment will result in the ultimate need for only eight DAFT units to provide treatment capacity for the design period. The proposed Project will completely rehabilitate DAFT units 1 through 6 and associated equipment to serve near-term load, reserving DAFT units 15 and 16 for future upgrades as 2030 loads are approached. Figure 1-4 is a rendering showing the improved DAFT units, thickened sludge pumps, and new polymer area. Once the Project is completed, DAFT units 7 through 14 will be abandoned.

A variety of improvements will be made to the DAFT tanks and associated systems, as listed in Table 1-1. Several improvements will be constructed in Process Area 73 (Figure 1-2). Process Area 73 is the new designation for new facilities, including new sludge screens to remove debris, polymer storage and blending as a thickening aid, odor control, hot water loops and equipment, and an electrical room. Figure 1-5 is a rendering showing the Process Area 73 odor control and screening facility.

Other improvements include upgrades to pressurized water feed and saturation tanks and replacement of the collector mechanisms in the DAFT tanks. DAFT tanks 1 through 6 will be covered to contain odors from the PS portion of the process flow and the foul air routed to an odor treatment process.

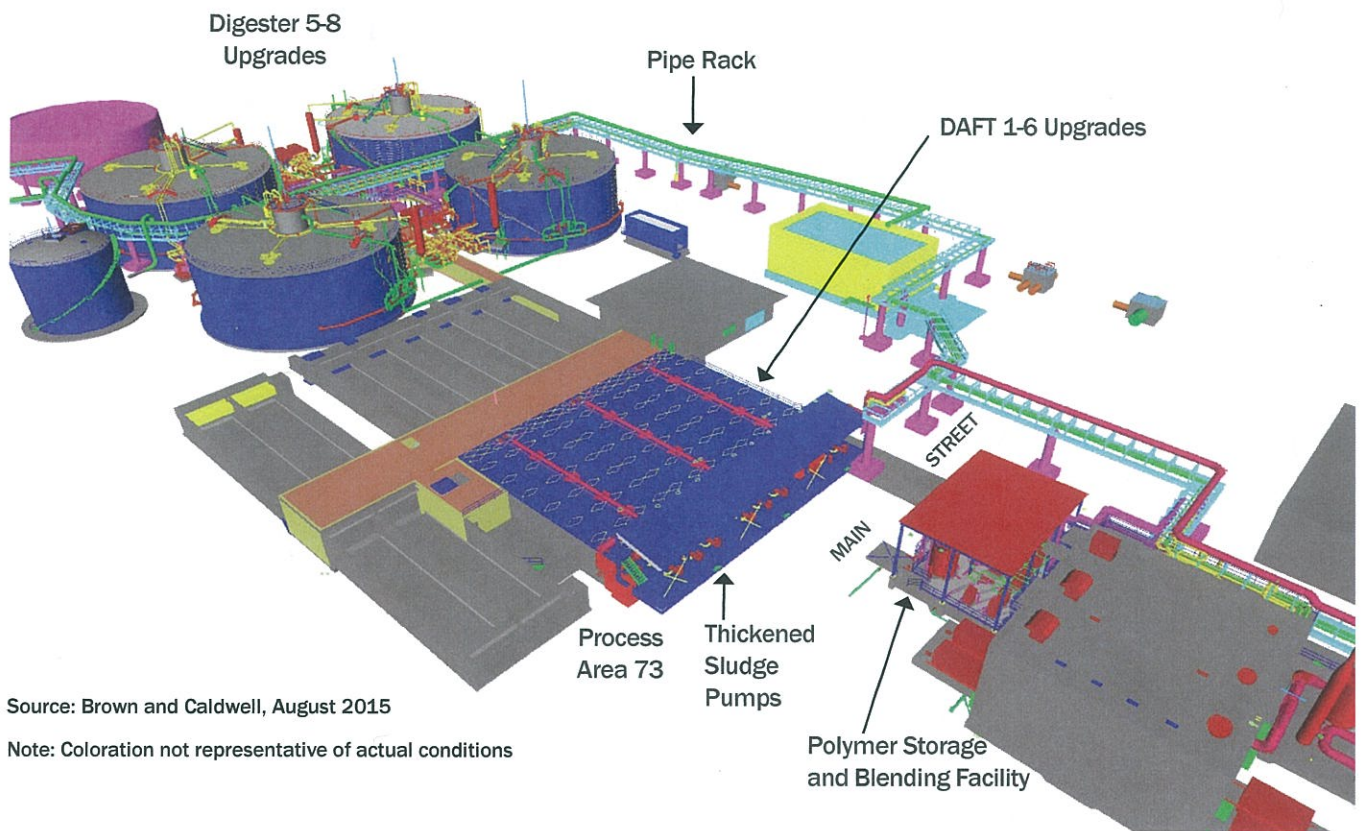
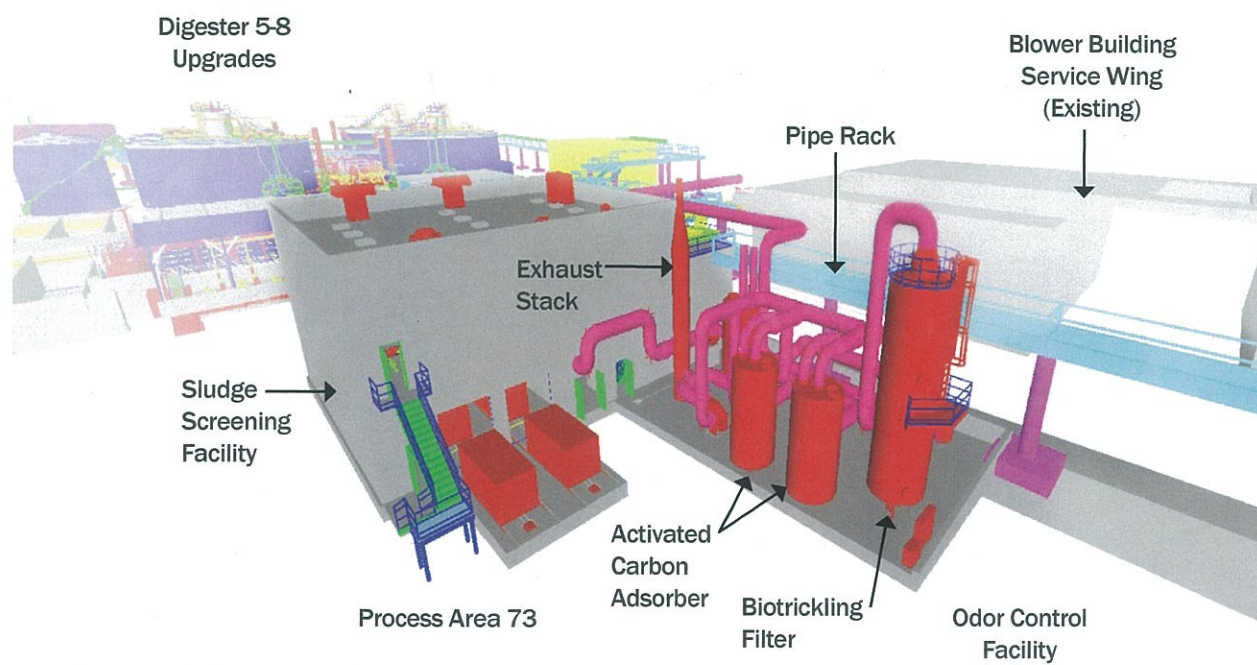


Figure 1-4. Rendering of Improved DAFT Tanks, Thickened Sludge Pumps, and New Polymer Area



Note: Coloration not representative of actual conditions

Source: Brown and Caldwell, April 2015

Figure 1-5. Rendering of Process Area 73, Odor Control, and Screening Facility

Process Conversion

The new digester systems will convert the current mesophilic anaerobic digestion process to a TPAD system. With completion of the Project, new sludge screening and thickening facilities will evenly distribute thicker sludge to four newly rehabilitated digesters that can accept high organic loadings and process sludge at thermophilic temperatures. The completely new first stage of the process will perform the majority of volatile solids (VS) stabilization and produce most of the digester gas.

New sludge cooling facilities will reduce the temperature of the sludge to mesophilic temperatures and the sludge will be distributed to the existing south campus digesters that will complete the second-stage digestion process. Digester gas will be safely conveyed from digesters to compressors and from compressors to uses in a new outdoor pipe network that will result in a safer campus tunnel system.

The digester gas will continue to be blended with natural gas to produce power in the RWF's power generation system. As discussed later in this section, a new future cogeneration system at the RWF will use the gas more efficiently to meet nearly all RWF power requirements, and to meet the total process heat requirement. The remaining mesophilic digesters can be more simply renovated in subsequent rehabilitation projects that will improve the physical characteristics of the second-stage digesters. The renewed process will provide a better-stabilized product for the potential future new digested sludge dewatering and load-out facilities. Additionally, the TPAD process will position the RWF for an easy conversion to full Class A biosolids production with insertion of some simple batch tanks at a future date.

Odor Control

The RWF does not currently have an odor control system. The proposed Project, however, does have an odor control system for the rehabilitated DAFTs and screening bins. The new system to be located in Process Area 73 will be a one-stage biotrickling filter – activated carbon absorber system (Figures 1-2 and 1-5). Biotrickling filters include a reacting vessel containing inert media where bacteria remove odorous compounds through bacterial oxidation. Activated carbon is effective at removing odorous compounds and volatile organic compounds (VOCs) from air streams through physical adsorption of compounds that compose the gases and the surface of the carbon.

Flares

The existing flare system at the RWF is located south of existing digester 7. Figure 1-6 is a photo of this system. The purpose of the flare system is to burn excess digester gas when the gas is not utilized by the downstream engines. The system includes a low rate ground flare (enclosed type) used to handle small demands and a high rate open flare (candlestick type) to handle larger demands. As shown in Figure 1-6, the flare height is 41.6 feet above



Figure 1-6. View of Existing Two-Flare System and New Location

existing finished grade.¹⁰ These flares act together as a protection against the over-pressurization and potential atmospheric gas release through the digester cover relief valves.

The proposed Project provides for a complete new flare system to serve as the primary flares for the digester gas system. This facility is under design and the new flare system will resemble the existing flare system (Figure 1-6), including both enclosed and candlestick types flares. The system will be designed to the latest codes, using appropriate technology for an abatement device, and will improve the overall system's operational reliability and safety. The existing flare system will be rehabilitated and will serve as a redundant backup to the new flare system. As such, it will not be in operation the majority of the time.

Demolition

The proposed Project includes limited demolition activities that will be accomplished in two phases. The first phase includes all items that are currently abandoned or out of service, which can be demolished without any replacement systems. The second phase includes items that cannot be removed until new systems are in place.

Phase 1/immediate demolition includes:

- Mechanical equipment, selected structural components, and piping specifically associated with digesters 5 through 8
- Equipment and piping specifically associated with DAFTs 1 through 6
- Selected abandoned piping in the digester tunnels
- Hazardous piping serving the P&E Building (natural gas, blend gas, fuel oil)

Phase 2/delayed demolition includes:

- Existing digester gas piping system
- Remaining hazardous piping in the digester tunnels and DAFT gallery
- Existing hot water system piping
- Existing sludge feed piping

Construction Schedule

The construction schedule for the proposed Project is projected to span almost three years, with the Notice to Proceed in June 2016 and completion in April of 2019.

8. Other Construction Projects at the RWF

The City's Environmental Services Department (ESD) anticipates other projects may be constructed or in construction during the proposed Project construction duration. The construction schedule for all projects is shown on Figure 1-7 while Table 1-2 provides brief descriptions.

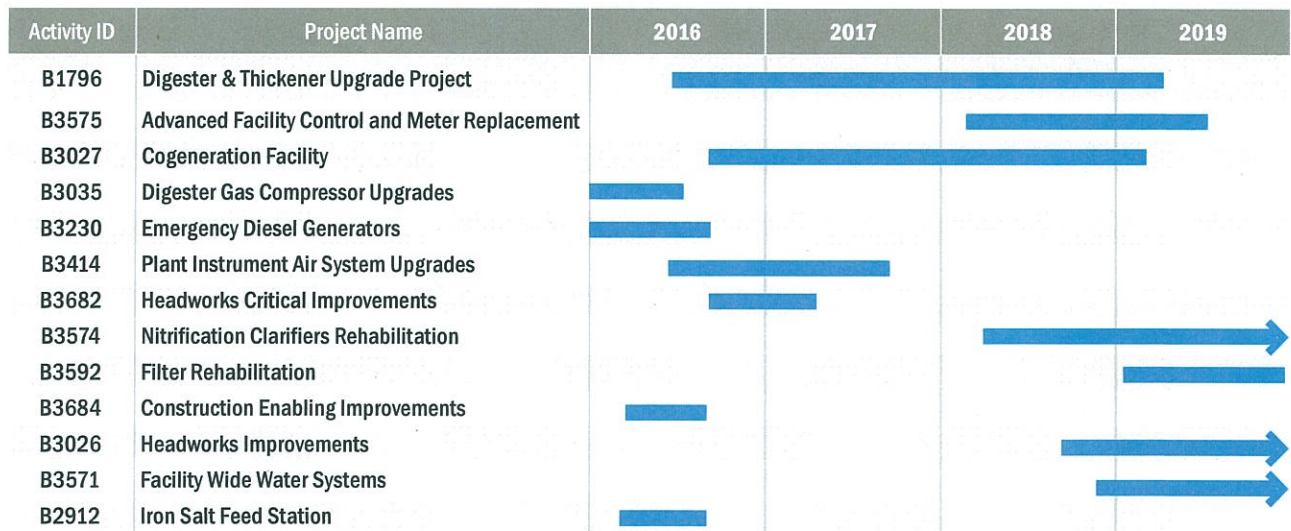
9. Surrounding Land Uses and Setting

The Project area is located in the central zone of the RWF operational area and surrounded by existing wastewater treatment facilities. Other uses within the RWF property include a 750-acre sludge drying area and an 850-acre former salt production pond. The remaining acreage is green land that buffers the RWF from adjacent communities. The Project site is distant from potentially sensitive residential land uses with the closest located in the Alviso Village area, about one mile to the east.

1.10 Purpose of this Initial Study

Section 15063 of the California Environmental Quality Act (CEQA) Guidelines provides for preparation of an Initial Study (IS). The purposes of an IS are to:

1. Provide the lead agency with information to use as the basis for deciding whether to prepare an EIR or Negative Declaration.
2. Enable an applicant or lead agency to modify project, mitigating adverse impacts before an EIR is prepared, thereby enabling a project to qualify for a Negative Declaration.
3. Assist in the preparation of an EIR if one is required.
4. Facilitate environmental assessment early in the design of a project.
5. Provide documentation of the factual basis for the finding in a Negative Declaration that a project will not have a significant effect on the environment.
6. Determine whether a previously prepared EIR could be used for the project.



Source: CIP all active Projects and Schedules March 27, 2015
 Digester and Thickener Upgrade Project, 60% Design Submittal, April 2015

Figure 1-7. Master Plan Projects with Construction Schedules which Overlap the Project Schedule

Table 1-2
Descriptions of Other Construction Projects at the RWF

Activity ID	Project Name	Description
B3575	Advanced Facility Control and Meter Replacement	Upgrades and replaces outdated and inaccurate flow meters throughout the plan, and creates and implements advanced facility control algorithms to operate the facility more effectively and efficiently.
B3027	Cogeneration Facility	Installation of internal combustion engines in a new building to replace existing engines and generators that can use blended digester gas and natural gas. The new cogen facility will provide electric power to the plant, as well as providing digester heating and other plant heating needs.
B3035	Digester Gas Compressor Upgrades	Replaces existing digester gas compressors with two new screw-type digester gas compressors; each rated at 2,000 SCFM at 60 psig discharge pressure and construction of 4,400 SF building to house the new compressors. The project will also include ancillary equipment, such as digester gas coolers, cooling towers, and necessary piping.
B3230	Emergency Diesel Generators	Installs four emergency diesel generators at 3 MW each to sustain critical operations and secondary treatment for 48 hours in the event of power loss. The Project also includes the installation of an emissions system, fueling system, storage building, control system, and monitoring system with DCS switchgear and synchronizing panels.
B3414	Plant Instrument Air System Upgrades	Replaces the existing high-pressure plant instrument air supply system with a new above-grade distributed air supply system to be used by all plant's pneumatic controls.
B3026	Headworks Improvements	Improves the functional reliability of Headworks (HW) No. 2 so HW No. 1 can be taken out of service for repair.
B3682	Headworks Critical Improvements	Replaces some of the existing equipment in HW No. 2. Equipment to be replaced include two existing Envirex climber screens in HW No. 2, gates and actuators, modification to screening conveying system, and update of controls electronics.
B3574	Nitrification Clarifiers Rehabilitation	Modification of 16 clarifiers to improve performance, focusing primarily on mechanical, structural, and electrical rehabilitation.
B3592	Filter Rehabilitation	Rehabilitation of filter complex, including replacement of filter media, underdrain systems, miscellaneous valves and piping of all 16 filters, as well as repairs and upgrades required to the filters to suit the intended future role of the RWF.
B3684	Construction Enabling Improvements	Improvements to provide the necessary infrastructure to support increased construction activity across the RWF site. It will include RWF access improvements, security, worker parking, contractor trailer and laydown areas, and future CM space requirements.

Table 1-2
Description of Other Construction Projects at the RWF (Cont'd)

Activity ID	Project Name	Description
B3571	Facility Wide Water Systems	Upgrades to the existing water pumping and piping systems to address future increase in demands and provide overall rehabilitation and improvements.
B2912	Iron Salt Facilities	New chemical storage and dosing facilities to feed ferric chloride for control of hydrogen sulfide content in the digester gas and polymer for enhanced solids removal in the primary clarifiers.

Source: Environmental Services Department May 2015

The City is in the process of securing funding for the Project from the State Water Resources Control Board (SWRCB) State Revolving Fund (SRF) Loan Program. The SRF Loan Program is partially funded by the USEPA and, by agreement, is administered by the SWRCB. Because of partial federal funding, the loan program is subject to federal environmental regulations, most notably the federal Endangered Species Act, the National Historic Preservation Act, and the General Conformity Rule for the Clean Air Act, among others. Instead of the National Environmental Protection Act, USEPA has chosen to use CEQA as the compliance base for California's SRF Loan Program. To comply with applicable federal statutes and authorities, USEPA established specific "CEQA-Plus" requirements in the Operating Agreement with the SWRCB for administering the SRF Loan Program. Accordingly, this IS addresses appropriate CEQA-Plus requirements in Chapter 2.

As discussed earlier, an EIR on the RWF Master Plan was certified by the City on November 4, 2013.⁵ Although the proposed Project was not within the scope of the EIR, the EIR is a very recent document containing substantial information of existing conditions and the environmental setting. Section 15150, Incorporation by Reference, of the CEQA Guidelines provides that a CEQA document may incorporate by reference all or portions of another document which is a matter of public record or is generally available to the public. Pertinent subsections of Section 15150 provide the following:

- a) "When all or part of another document is incorporated by reference, the incorporated language shall be considered to be set forth as part of the text of the EIR or Negative Declaration.
- b) Where part of another document is incorporated by reference, such other document shall be made available to the public for inspection at a public place or public building.
- c) Where an EIR or Negative Declaration uses incorporation by reference, the incorporated part of the referral document shall be briefly summarized where possible ..."

The Master Plan EIR (SCH #2011052074) is available for review at the City Planning Department (see Section 1.2) and at the City's website at <http://www.sanjoseca.gov/index.aspx?nid=2435>.

1.11 Other Public Agencies Whose Approval is Required

SWRCB, Division of Finance for construction financing; and Bay Area Air Quality Management District, Authority to Construct and Permit to Operate for flares, odor control system, and fixed covers for digesters 5-8.

CHAPTER 2

DISCUSSION OF ENVIRONMENTAL CHECKLIST

A discussion of the environmental checklist is included below. In general, the format followed includes a discussion of the setting and an impact analysis for each resource category. Reference and information sources for the checklist are included at the end of this document.

The impact analyses include a summary of control measures incorporated into the Project by the City of San Jose (City) Environmental Services Department (ESD) to minimize potential impacts, the environmental checklist significance criteria, and an analysis of potential impacts. Control measures are procedures known to further reduce the potential for impacts based on regulatory agency requirements, standards in the industry, and construction/operating experience. As appropriate, Initial Study (IS) mitigation measures are included to reduce impacts to less-than-significant levels. The Mitigation Monitoring and Reporting Plan is included as Appendix A.

A. AESTHETICS

SETTING

The Digester and Thickener Facilities Upgrade Project (Project) area is within the central portion of the 196-acre main operational area of the San Jose-Santa Clara Regional Wastewater Facility (RWF). As shown on Figure 1-2, Project facilities are bounded by a variety of RWF liquid and solids treatment facilities. The Project area and vicinity are relatively flat allowing for views from elevated locations in the eastern foothills, Mount Hamilton, and the Diablo Mountains to the east, and the San Francisco Bay lands to the north. Figures 1-3 through 1-5 are renderings of Project components while Figure 1-6 shows the existing two-flare system and the new replacement flare location.

Zanker Road and Los Esteros Road are the roadways which provide primary access to the RWF and main operational area, and are the primary means by which the public can observe the Project area. Motorists using Highway 237 can also view the Project area. The periphery of the main operational area consists of fencing plus landscaping, including eucalyptus trees, shrubs, and manicured lawns. From outside the area, viewing opportunities of the Project area are limited and largely screened by nearby structures and mature tree growth. As can be seen on Figure 1-2, most of the nearby facilities in the vicinity are industrial in character, with most buildings being one to two stories high. The main residences where the Project vicinity could be visible are located in the Alviso Village area which is about 0.9 mile west of the Project area.

IMPACT ANALYSIS

Control Measures Incorporated by the City:

- A1. The Contractor shall keep the work site clean and free from rubbish and debris. Materials and equipment shall be removed from the site when they are no longer needed.

- A2. Upon completion of the work and before final acceptance, the work site shall be cleared of equipment, unused materials, and rubbish to provide a clean and neat appearance.
- A3. Provide temporary lighting in work areas sufficient to maintain lighting levels during working hours not less than lighting levels required by the Occupational Safety and Health Administration (CAL/OSHA). Where available, existing permanent lighting facilities may be used in lieu of temporary facilities.
- A4. Comply with the City's Streetlights Council Policies 4-2 and 4-3 for new permanent streetlight lighting.
- A5. Plant operations staff will alert City Information regarding use of the candlestick flare so that any inquiries by the public can be quickly addressed.

Significance Criteria

RESOURCE CATEGORY / SIGNIFICANCE CRITERIA	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact	Information Sources
A. AESTHETICS					
Would the Project:					
1) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11
2) Substantially damage scenic resources, including, but not limited to, trees, rock, outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11
3) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	11
4) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	11,17

Discussion

1,2) **No Impact.** There are no scenic vistas in the Project vicinity, and no rock outcroppings or historic buildings are located on site or in the immediate area. Thus, no impacts will occur.

3) **Less than Significant Impact.** The proposed Project will require the presence of construction crews at the RWF for almost a 3-year period. Accumulation of waste materials and debris could occur, negatively impacting the visual character of the area. However, Control Measures A1 and A2 have been incorporated into the Project by the City to address this issue. The Contractor will be required to keep the work area free from accumulations of waste material

or rubbish caused by employees or by the work, and the work area will have a clean and neat appearance upon completion of the Project. This impact is considered to be less than significant.

The Project Description and Figures 1-3 through 1-6 discuss and illustrate the Project components. Visually, many of the components such as covering digesters 5-8 and dissolved air flotation thickener (DAFT) tanks 1-6, and construction of associated equipment will have negligible visual effects. The main Project components which do have visual effects include construction of the above-grade pipe rack, Process Area 73, and the replacement flare.

The pipe rack will be about 20-25 feet high and will extend from digester 9 through 16 through the middle of the Project area to the west side of the existing blower building, a distance of about 3,200 feet. The main pipe rack will consist of single concrete columns supporting a steel pipe rack (Figure 1-3). Horizontal steel beams with cross bracing struts will span between each concrete column.

The main Project components in Process Area 73 include the new primary sludge screening building, the polymer storage and blending facility, and the new odor control facility. The improvements with most visual importance include the sludge screening building which will be a 65-foot wide, 70-foot long, and 35-foot high structure. The odor control facility (Figure 1-5) features activated carbon adsorber and biotrickling filter tanks and a 40-foot high exhaust stack, which will be a required minimum 5 feet higher than the adjacent sludge screening building and similar in height to the stack of the adjacent existing blower building.

The replacement flare will be constructed near digesters 11 and 16, about 200 feet south of the existing flare. The flare stacks for the enclosed and candlestick flares will be about 40 feet high or about the same height as the existing flares (Figure 1-6).

The Project involves upgrade of existing facilities and the construction of limited new facilities, as discussed above. The new facilities will be located within the central portion of the main processing area, amongst other existing process facilities that are similar in appearance and height. Therefore, the proposed facilities would be consistent with the existing visual setting, and would result in a less-than-significant impact to the visual quality of the site and its surroundings.

4) **Less than Significant Impact.** Night time lighting is currently used throughout the main operational area, including the Project area, with limited lighting adjacent to the Project area. Additional temporary lighting may be needed during construction and some additional permanent lighting will be required for security purposes. Control Measures A3 and A4 have been incorporated into the Project to address temporary and permanent lighting. City Public Streetlights Council Policies 4-2 and 4-3 (Control Measure A4) require that new street lighting be dimmable and programmable and fully shielded/downward facing lights, which would control the amount and color of light shining in streets and sidewalks. With these control measures in place, and given that there are no residences or other active nighttime uses in the immediate vicinity of the proposed facilities, the impact relative to temporary and permanent lighting is less than significant.

The Project includes replacement of the existing enclosed and candlestick flare system. In the past, this system has been used randomly by plant operations personnel when upstream gas pressures increase to unacceptable levels or when gas engines are down due to maintenance or mechanical problems. In the latter instance, the larger candlestick flare must be used which generates a flare of 6-8 feet in height from a stack height which is about 40 feet high. When this has occurred at night, motorists using Highway 237 have called the City expressing concern that a problem exists. Now, when use of the large flare is anticipated by plant personnel, City Information is alerted so that when calls are received it can be explained to the caller that the flare is a rare but normal feature of the plant operations.³⁹ This same condition may be expected with use of the new replacement flare and although the replacement flare would not represent a new source of substantial light, the plant operations will continue to utilize existing procedures of calling City Information when it is known the candlestick flare will be used (Control Measure A5). The impact associated with use of the replacement candlestick flare is less than significant.

Mitigation Measures

None required.

B. AGRICULTURE AND FOREST RESOURCES

SETTING

The RWF has a General Plan designation of Public/Quasi-Public and HI Heavy Industrial zoning.^{1,2} There are no existing agricultural lands or forest resource areas within or in the immediate vicinity of the Project area. According to the California Department of Conservation important farmland map for Santa Clara County, the Project area is designated as Urban and Built-Up Land.¹² Surrounding lands to the south of the Project area currently serve as open space/buffer lands, much of which is designated as grazing land. Pond 18 located northeast of the Project area is under a Williamson Act contract and is designated as Non-Prime Agricultural Lands.¹³ No other lands in the immediate area are enrolled in the Williamson Act Program.

IMPACT ANALYSIS

Control Measures Incorporated by the City

None.

Significance Criteria

RESOURCE CATEGORY / SIGNIFICANCE CRITERIA	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact	Information Sources
B. <u>AGRICULTURE AND FOREST RESOURCES</u>					
Would the Project:					
1) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11,12
2) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11,13
3) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)) or timberland (as defined in Public Resources Code section 4526)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11
4) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11
5) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11

Discussion

1-5) **No Impact.** Criteria B1 through B5 are not relevant to the Project and no impact would occur. Accordingly, pursuant to CEQA-Plus requirements, the Project would have no impact relative to the Federal Farmland Protection Policy Act.

Mitigation Measures

None required.

C. AIR QUALITY

SETTING

Federal, State, and regional agencies regulate air quality in the San Francisco Bay Area Air Basin (Air Basin). At the Federal level, the U.S. Environmental Protection Agency (USEPA) is responsible for overseeing implementation of the Federal Clean Air Act (CAA). The California Air Resources Board (CARB) is the State agency that regulates mobile sources throughout the state and oversees implementation of the state air quality laws and regulations, including the California CAA. The primary agency that regulates air quality in the Project area is the Bay Area Air Quality Management District (BAAQMD). The BAAQMD has permit authority over stationary sources, acts as the primary reviewing agency for environmental documents, and develops regulations that must be consistent with, or more stringent than, federal and state air quality laws and regulations.

Federal Air Quality Regulations

The Federal CAA requires CARB, based on air quality monitoring data, to designate portions of the state where the national ambient air quality standards are not met as “nonattainment areas”. Because of the differences between the national and state ambient air quality standards, the designation of nonattainment areas is different under the federal and state legislation. Areas that meet the air quality standards are considered to be in attainment of the standards. Areas where there is no monitoring data available or insufficient data to classify area are considered unclassified, which for regulatory purposes is treated as an attainment area.

The Bay Area as a whole does not meet national ambient air quality standards for ozone and PM_{2.5} (respirable particulate matter within a diameter less than 2.5 microns). The USEPA has classified the region as marginal nonattainment for 8-hour ozone. In October 2009, the USEPA designated the Bay Area as nonattainment for 24-hour PM_{2.5} standard. The Bay Area is considered as attainment or unclassifiable with respect to the national air quality standards for all other pollutants. The USEPA requires states that have areas that are not in compliance with the national standards to prepare and submit air quality plans showing how the standards would be met. If the states cannot show how the standards would be met, then they must show progress toward meeting the standards. These plans are referred to as the State Implementation Plan (SIP).

As part of the SIP, California has incorporated the Federal General Conformity Rule. The USEPA’s Conformity Rule, as promulgated in 40 CFR Part 93 Subpart B, and 40 CFR Part 51, Subpart W, implements the conformity requirements of Section 176(c) of the 1990 Amendments to the Federal CAA. Conformity to the SIP is defined in the CAA as requiring all federal agencies to ensure that any agency activity conforms with an approved SIP in nonattainment or maintenance areas. Compliance with the SIP assists in eliminating or reducing the number of violations of the national ambient air quality standards, which expedites attainment of the standards. The General Conformity Rule requires that the total of direct and indirect emissions of nonattainment or maintenance area criteria pollutants, including ozone precursors (reactive organic gases and nitrogen oxides) and PM_{2.5} precursors (sulfur dioxide,

nitrogen dioxide, and reactive organic compounds or ammonia) be considered in determining conformity.

If a federal action, such as SRF-funded projects, is to take place in a nonattainment or maintenance area, it is subject to a General Conformity evaluation. This determination can take one of three forms: (1) if the action meets certain criteria, it may be specifically exempted, regardless of whether the action would emit pollutants of concern; (2) if the action is determined to emit pollutants below specified de minimis thresholds and the potential emission levels are not regionally significant (less than 10 percent of the region's emissions for a particular pollutant), the action can be assumed to conform with the SIP; and (3) for actions that do not fall under either of these two categories, a complete conformity determination must be made. Specifics of this process are listed in 40 CFR 93, Subpart B.

For SRF-funded projects, a General Conformity analysis applies only to projects in a federal nonattainment area or an attainment area subject to a maintenance plan and applies to those pollutants that the area has been designated as nonattainment or maintenance. As described above, the Bay Area has been designated nonattainment for ozone and PM_{2.5}.

California Air Quality Regulations

The California CAA outlines a program for areas in the state to attain the California ambient air quality standards by the earliest practical date. The California CAA set more stringent air quality standards for most of the pollutants covered under national standards, and additionally regulates other pollutants. If an area does not meet the California ambient air quality standards, the CARB designates the area as a nonattainment area. With respect to the state air quality standards, the Bay Area is a nonattainment area for ozone and particulate matter (PM₁₀ and PM_{2.5}), and either attainment or unclassified for other pollutants. The California CAA requires local air pollution control districts to prepare air quality attainment plans for pollutants, except for particulate matter, that are not in attainment with the state standards. These plans must provide for district-wide emission reductions of five percent per year averaged over consecutive three-year periods or if not, provide for adoption of "all feasible measures on an expeditious schedule".

Regional Air Quality Regulations and Planning

Air quality in the Project region is regulated by the BAAQMD. The BAAQMD regulates stationary sources (with respect to federal, State, and local regulations), monitors regional air pollutant levels (including measurement of toxic air contaminants), develops air quality control strategies and conducts public awareness programs. Regulation of stationary sources is through the BAAQMD's Authority to Construct/Permit to Operate process.

The BAAQMD prepared and adopted the Bay Area 2010 Clean Air Plan (CAP).¹⁴ This CAP updates the most recent ozone plan, the 2005 Ozone Strategy. Unlike previous Bay Area CAPs, the 2010 CAP is a multi-pollutant air quality plan addressing four categories of air pollutants:

- Ground-level ozone and the key ozone precursor pollutants (reactive organic gases and oxides of nitrogen), as required by State law;
- Particulate matter, primarily PM_{2.5}, as well as the precursors to secondary PM_{2.5};
- Toxic air contaminants (TACS); and
- Greenhouse gases.

While the CAP addresses state requirements, it will also provide the basis for developing future control plans to meet federal requirements (air quality standards) for ozone and PM_{2.5}. The BAAQMD has also developed CEQA Air Quality Guidelines that establish significance thresholds for evaluating new projects and plans and guidance for their evaluation.¹⁵ These guidelines, however, have been legally challenged and in 2012 the Alameda County Superior Court ruled the BAAQMD failed to comply with CEQA when the thresholds were adopted. In 2013, the First District Court of Appeals reversed the trial court's judgment and upheld the BAAQMD's CEQA Guidelines. An appeal is pending at the California Supreme Court. Although not required to do so, the City as Lead Agency continues to use the 2011 BAAQMD thresholds of significance because the science and reasoning contained in the BAAQMD Air Quality Guidelines provides the latest state-of-the-art guidance available.

Sensitive Receptors

For the purposes of this air quality analysis, sensitive receptors are defined as facilities and land uses that include members of the population that are particularly sensitive to the effects of air pollutants such as children, the elderly, and people with illnesses. Examples include schools, hospitals, and daycare centers. Residential areas are also considered sensitive to poor air quality because people usually stay home for extended periods of time, which results in greater exposure to ambient air quality. There are no sensitive receptors (e.g., residences, schools) in the immediate vicinity of the Project area. The closest residences are located south of Highway 237, approximately one mile from the Project area. There are no hospitals, schools, daycare centers, or long-term care facilities within one mile of the Project area. The Jubilee Christian Youth Center, where children frequently engage in outdoor activities, is located one mile southwest of the Project area.

IMPACT ANALYSIS

Control Measures Incorporated by the City.

- C1. Obtain an Authority to Construct and Permit to Operate from the BAAQMD and comply with permit conditions.
- C2. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- C3. All haul trucks transporting soil, sand, or other loose materials off-site shall be covered.

- C4. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- C5. All vehicle speeds on unpaved roads shall be limited to 15 mph.
- C6. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- C7. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
- C8. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator.
- C9. Post a publicly visible sign with the Code Enforcement telephone number (408) 535-7770 as the contact at the City of San Jose regarding dust complaints. The City's Code Enforcement division shall respond and take corrective action within 48 hours. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.
- C10. Prevent foul odors originating from demolition activities from leaving the RWF property at all times. Draining of tanks and pipes to be demolished that contain wastewater or wastewater-derived solids (sludge) will be completed as indicated in the Contract Documents. The Contractor shall flush and clean all tanks/sumps, piping, and process equipment of wastewater and wastewater-derived solids and grit prior to disconnecting, removing, salvaging, relocating, or abandoning-in-place those items. Deposits removed shall be disposed of in accordance with the procedures specified in the Contract Documents. In cases where the tank/sump, piping, or processing equipment cannot be adequately flushed and cleaned prior to disconnecting, removing, salvaging, relocating, or abandoning-in-place, the items in question shall be covered to contain the odors until the tanks/sumps, equipment, or piping are cleaned and the odorous materials are removed and disposed as specified. Staging areas shall not be used to store odorous demolished equipment, piping, and wastewater and wastewater-derived solids.
- C11. Replace floating areas of digesters 5-8 with fixed covers to eliminate fugitive air and odor emissions from these units.
- C12. Provide fixed covers for DAFTs 1-6 and route foul air from these units and associated equipment to a new odor treatment system.

Significance Criteria

RESOURCE CATEGORY / SIGNIFICANCE CRITERIA	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact	Beneficial Impact	Information Sources
C. AIR QUALITY						
Would the Project:						
1) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11,14,15
2) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11,15
3) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11,15
4) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11
5) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11

Discussion

1) **Less than Significant Impact.** For air quality plan consistency determinations, the BAAQMD recommends that agencies analyze the Project with respect to the following questions: (1) does the Project support the primary goals of the air quality plan; (2) does the Project include applicable control measures from the air quality plan; and (3) does the Project not disrupt or hinder implementation of any 2010 CAP control measures? If all the questions are concluded in the affirmative, BAAQMD considers the Project consistent with air quality plans prepared for the Bay Area.¹⁵ Any project that would not support the 2010 CAP goals would not be considered consistent with the 2010 CAP, and if approval of the Project would not result in significant and unavoidable air quality impacts after the application of mitigation, then the Project would be considered consistent with the 2010 CAP.

As presented in the subsequent impact discussions, proposed Project-related construction and operation emissions would not exceed the identified guidelines or thresholds; therefore, the Project would support the primary goals of the 2010 CAP. As mentioned above, projects that incorporate all feasible air quality plan control measures are considered consistent with the 2010 CAP. There appear to be no 2010 CAP control measures that would be directly applicable to the proposed Project. However, control measures have been incorporated into the Project, including obtaining an Authority to Construct and Permit to Operate from the BAAQMD and complying with permit conditions (Control Measure C1), and complying with applicable BAAQMD basic construction control measures (Control Measures C2-C9).

The Project would support the primary goals of the 2010 CAP and it would not disrupt or hinder implementation of any 2010 CAP control measures. Complying with Control Measures C1-C9 would ensure that the Project would comply with applicable BAAQMD requirements for control of construction period and operational emissions, and ensure that potential air emissions impacts would be less than significant.

2) **Less than Significant Impact.** There are construction and operational emissions associated with the proposed Project which are discussed below.

Construction

Construction of the proposed Project, which would span almost three years, would include worker traffic, trucks hauling materials and supplies to and from the site, and a variety of on-site construction equipment. Criteria pollutant and precursor exhaust emissions of reactive organic gases (ROG), nitrogen oxides (NO_x), respirable particulate matter (PM₁₀), and fine particulate matter (PM_{2.5}) from vehicles and construction equipment would incrementally add to the regional atmospheric loading of these pollutants during construction of the Project.

Construction impacts related to the Project are assessed by comparing estimated direct and indirect Project exhaust emissions to BAAQMD significance thresholds. Table 2-1 provides this comparison. Appendix B contains the emission calculations.

Table 2-1. Construction-Related Air Quality Project Impacts

Source of emissions	ROG	NO _x	PM ₁₀ ^a	PM _{2.5} ^b
	lbs/day			
Construction equipment	3.78	33.45	1.75	1.75
Mobile sources	0.05	1.78	0.01	0.01
Total	3.83	35.23	1.76	1.76
BAAQMD threshold	54	54	82	54
Exceed threshold?	No	No	No	No

Source: Ray Kapahi, Air Quality Consultant, June 2015

a. BAAQMD's construction-related significance thresholds for PM₁₀ and PM_{2.5} apply to exhaust emissions only and not to fugitive dust.

Note: Emissions were modeled using the latest offroad 2007 version.

Table 2-1 shows that construction emissions would be less than the emission thresholds, thus the impact is less than significant. It should be noted that the construction emissions in Table 2-1 are conservative representing maximum day emissions for both mobile sources and construction equipment. Construction emissions during much of the almost three-year construction schedule would be less than that shown in the table. Only the exhaust portion of PM₁₀ and PM_{2.5} emissions are compared against the construction thresholds. The BAAQMD considers implementation of BAAQMD-recommended basic control measures for fugitive dust (Control Measures C-2 through C-9) sufficient to ensure that construction-related fugitive dust is reduced to a less-than-significant level.

Operation

As discussed in Chapter 1, the Project would transition the RWF away from the use of sludge lagoons and drying beds to an enclosed, mechanical treatment system. Using fixed covers for digesters 5-8 and DAFTs 1-6 will eliminate these treatment units as sources of fugitive air emissions, and odor as discussed later in this section.

With the temperature (thermophilic/mesophilic) phased anaerobic digestion (TPAD) process provided by the Project, digester gas production will increase. Currently, digester gas from the digester campus is utilized in the RWF's power generation facilities to help meet the plant's electricity and heat demands. However, portions of this system are being replaced by a new cogeneration facility with up to four new reciprocating engine generators that will meet nearly all RWF power requirements. The cogeneration facility will use blended gas, a combination of digester gas and natural gas, for fuel. The construction schedule for this facility (see Figure 1-7) is similar to that of the proposed Project. An IS/MND for the Cogeneration Project was prepared in 2014.⁴³

During the majority of time, digester gas from the proposed Project will be routed to the new cogeneration facility, though occasionally it may be necessary to utilize the replacement flair to combust the gas. Both the cogeneration facility and replacement flare are regulated sources by the BAAQMD.

Table 2-2 compares daily and annual emissions from the cogeneration (Cogen) facility with BAAQMD and Conformity de minimis emission thresholds. As can be seen from the table, operational emissions would be less than the significance thresholds. Thus, from a CEQA perspective, operational emissions from the proposed Project would result in a less than significant impact. With respect to the General Conformity requirements, emissions at these levels would be less than the applicable General Conformity de minimis thresholds and further conformity evaluation is not required.

Table 2-2. Operational-Related Air Quality Project Impacts

	ROG	NO _x	PM ₁₀ ^a	PM _{2.5} ^b
	lbs/day			
Daily emissions from Cogen ^{a,b}	1.95	33.33	0.62	0.62
BAAQMD threshold	54	54	82	54
Exceed threshold?	No	No	No	No
	tons/year			
Annual emissions from Cogen ^{a,c}	0.23	3.92	0.07	0.07
BAAQMD threshold	10	10	15	10
Exceed threshold?	No	No	No	No
Federal Conformity thresholds	100	100	100	100
Exceed threshold?	No	No	No	No

Source: Ray Kapahi, Air Quality Consultant. June 2015

a. Emissions estimated assuming Project IC engines would comply with BAAQMD Best Available Control Technology Guidelines for Biogas Fired IC Engines.

b. Based on a peak daily digester gas volume of 3,100 scfm.

c. Based on an average daily digester gas volume of 2,000 scfm.

Note: Mobile sources are negligible and not included in the emission estimates.

It should be noted the operational emissions are very conservative as they are based on the projected digester gas production rates for 2030 for the entire digester campus, not the incremental rate for the Project for which data are not available. These rates are being used for the ongoing Project AQMD permitting process.⁴⁵ It should also be noted that the cogeneration facility together with the existing power generation facilities that will remain have the capacity to use all of the projected digester gas volumes without exceeding permitted capacity limits.

3) **Less than Significant Impact.** Based on BAAQMD guidance, if a project would result in an increase in ROG, NO_x, PM₁₀, or PM_{2.5} of more than its respective daily mass thresholds, then it would also be considered to contribute considerably to a significant cumulative impact.¹⁵ In developing thresholds of significance for air pollutants, BAAQMD has considered the emission levels for which a project's individual emissions would be cumulatively considerable. Therefore, if a project would exceed the identified significance thresholds, its emissions would be cumulatively considerable, and if a project would not exceed the significance thresholds, its emissions would not be cumulatively considerable. As shown in Tables 2-1 and 2-2, construction and operational emissions would be less than the thresholds, so the Project would not contribute to a cumulatively considerable impact on air quality.

4) **Less than Significant Impact.** Long-term operations-related emissions that would be associated with the Project would primarily be associated with the Cogeneration facility, a separate project where environmental review has been completed. The closest sensitive receptors are residences located at a distance of approximately one mile from the Project area. Project-related emissions at this location would be substantially diluted. Long-term operations-related impacts associated with exposure of sensitive receptors to substantial pollutant concentrations would be less than significant.

Construction activities would generate air pollutant emissions, including diesel particulate matter associated with equipment and heavy truck exhaust emissions. Construction activities would occur over almost a three-year period, thereby resulting in limited emissions, and construction emissions would be limited in intensity during the duration of construction, as discussed under checklist item 2 above. With the closest sensitive receptors distant from the Project area, the Project-related construction emissions would be sufficiently diluted at these locations. Short-term construction-related impacts associated with the Project exposing sensitive receptors to substantial pollutant concentrations would be less than significant.

5) **Less than Significant Impact.** Chapter 1, Introduction and Project Description, provides a background summary to the proposed Project. The Project is the backbone of a major anaerobic digestion process conversion at the RWF. It is an important component of a comprehensive Biosolids Management Program that would transition the RWF away from the use of sludge lagoons and drying beds to an enclosed, mechanical treatment system with the resulting dewatered biosolids hauled off-site. The current system is land intensive and historically been one source of odors in the area.

The Project includes demolition, construction, and operational phases. Both demolition and operation have potential odor issues, while there are none associated with construction.

Tanks, sumps, piping, and process equipment contain wastewater or sludge that can be a source of odor during demolition. However, Control Measure C10 has been included in the Project requiring the Contractor to prevent foul odors from leaving the RWF at all times. All tanks and piping to be demolished shall be drained, flushed, and cleaned. Deposits removed shall be disposed of in accordance with the Contract Documents.

The proposed Project has odor reduction benefits compared to existing facilities. New fixed covers at digesters 5-8 will eliminate these treatment units as a source of fugitive air and odor emissions (Control Measure C11). Digester gas will be transported via a new elevated pipe rack and used as a fuel in RWF internal combustion engines for heat and power production or combusted in new replacement flares. DAFT's 1-6 would be covered and the air stream routed via the pipe rack to a new odor treatment and control system in Process Area 73 where odorous compounds will be removed from the gas stream (Control Measure C12). Foul air from the new enclosed sludge screening facilities in Process Area 73 will also be directed to the new odor treatment and control system. The Project provides containment and treatment of digester gas and foul air in an area where there are no odor sensitive receptors in close proximity. Therefore, the odor impact associated with the Project would be less than significant.

Mitigation Measures

None required.

D. BIOLOGICAL RESOURCES

SETTING

A Biological Resource Assessment (BRA) for the proposed Project was prepared by Environmental Collaborative and is included in Appendix C.³⁵ The reader is referred to this report for a detailed discussion of the setting and impact analysis.

Existing Conditions

There is no remaining natural habitat within the main operations area of the RWF and the Project Area of Potential effects (APE). The entire APE has been completely disturbed by past grading, installation of wastewater treatment facilities, roadways, and other improvements.

Based on a review of data and species lists from the California Natural Diversity Data Base (CNDDB), the U.S. Fish and Wildlife Service (USFWS), and the California Native Plant Society (CNPS), suitable habitat for special-status plant and animal species known from the surrounding areas are absent from the site and none are expected to occur in the APE. Marginal foraging habitat for several special-status bird species, including the western burrowing owl, occurs in the ruderal fields south of the APE. The lack of vegetation cover limits the suitability of the APE for even occasional foraging by these species, and suitable nesting habitat is absent.

The ruderal fields south of the APE are included in an approximate 200-acre burrowing owl mitigation area established on RWF property in 2013 as part of the Santa Clara Valley

Habitat Plan (SCVHP).¹⁶ The SCVHP is a 50-year regional plan to protect special-status species and their habitat, while allowing for future development in Santa Clara County. The APE is outside of the actual plan area for the SCVHP, but the burrowing owl mitigation area was established in fulfillment of the habitat protection goals of the SCVHP. The APE is separated from the boundary of the burrowing owl mitigation area by a distance of about 750 feet at its closest location (the southernmost extension of the Project's elevated pipe rack). Known burrowing owl nesting colonies are located an even greater distance to the southwest of the APE, and dense eucalyptus landscaping separates the APE from these areas.

During the field survey, scattered ground squirrel burrows exist along the southern edge of the APE where it borders the ruderal fields known to support nesting colonies of burrowing owl. These burrows were observed along the landscaped berm just south of the storage yard used for recycling. No sign of burrowing owl was observed (i.e. white wash, feathers, or pellets) and occupation for nesting would be unlikely given the frequency and human activity in this area.

Regulatory Overview

Special-status species are plants and animals that are legally protected under federal and state laws. The USFWS is responsible for administering the federal Endangered Species Act (ESA) and the Migratory Bird Treaty Act. The California Department of Fish and Wildlife (CDFW) administers the California ESA. The compliance of the Project with these and other federal regulations is addressed later in this section.

IMPACT ANALYSIS

Control Measures Incorporated by the City

- D1. Ornamental trees removed during construction will be replaced by the City on-site or at other public project sites at the ratios specified below, or a fee will be paid to a non-profit organization that plants trees in San Jose. Final mitigation for impacts to protected trees will be determined by the City Planning Director.

Diameter of Tree to be Removed	Type of Tree to be Removed			Minimum Size of Each Replacement Tree
	Native	Non-Native	Orchard	
18 inches or greater	5:1	4:1	3:1	24-inch box
12 - 18 inches	3:1	2:1	none	24-inch box
less than 12 inches	1:1	1:1	none	15-gallon container
x:x = tree replacement to tree loss ratio				
Note: Trees greater than 18" diameter shall not be removed unless a Tree Removal Permit, or equivalent, has been approved for the removal of such trees.				

Significance Criteria

RESOURCE CATEGORY / SIGNIFICANCE CRITERIA	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact	Information Sources
D. BIOLOGICAL RESOURCES					
Would the Project:					
1) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies or regulations, or by the California Department of Fish & Game or U.S. Fish and Wildlife Services?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	35
2) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	35
3) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	35
4) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	35
5) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	35
6) Conflict with provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	35

Discussion

1) **Less than Significant Impact with Mitigation Incorporated.** Due to the extent of past development and absence of suitable habitat, no special-status species are believed to occur in the APE, and no effects are anticipated. Thus pursuant to CEQA-Plus requirements, no

federally-listed species would be affected and there would be no impact relative to the federal ESA as a result of Project implementation.

No evidence of any nesting was observed in the trees in the vicinity of the APE, including burrowing owl and other raptors. The known burrowing owl nesting colonies in the burrowing owl mitigation preserve are located over 750 feet to the south of the APE, and dense eucalyptus landscaping provides dense screening between the closest location where construction activities. Any burrowing owls in the nearby area are already acclimated to on-going activity at the RWF, and construction-related disturbance would not result in disturbance to these owls given the long distance, dense screening, and acclimation.

Although the limited habitat values and extent of on-going disturbance generally precludes the potential for nesting birds in the APE, there remains a remote possibility that new bird nests could be established in the few scattered trees and other vegetation in the APE, or that burrowing owl could establish a nesting colony in the few ground squirrel burrows located at the southern edge of the APE. Construction is currently scheduled to proceed in June of 2016, and if initiated during the bird nesting season (March 1 – August 31) construction-related disturbance could result in abandonment of the nests if any are present in the immediate vicinity. If construction-related noise and disturbance resulted in abandonment of a nest in active use and loss of any eggs or young in the nest, this would be a significant adverse impact and violation of the federal Migratory Bird Treaty Act and State Fish and Game Code sections. The mitigation measure below would serve to avoid this potential for violation of federal and state regulations by conducting a preconstruction survey and implementing appropriate construction restrictions if any active nests are encountered until any young birds have successfully fledged.

Mitigation Measure D-1. The following precautions shall be taken to avoid inadvertent take of bird nests protected under the federal Migratory Bird Treaty Act and the State Fish and Game Code:

1. If initial construction is proposed during the nesting season (February 1 to August 31), a focused survey for nesting raptors and other migratory birds shall be conducted by a qualified biologist within 7 days prior to the onset of construction in order to determine whether any active nests are present in the APE and surrounding area within 100 feet of proposed construction. The survey shall be reconducted any time construction has been delayed or curtailed for more than 7 days during the nesting season.
2. If no active nests are identified during the construction survey period, or development is initiated during the non-breeding season (September 1 to January 31), construction may proceed with no restrictions.
3. If bird nests are found, an adequate setback shall be established around the nest location and construction activities restricted within this no-disturbance zone until the qualified biologist has confirmed that any young birds have fledged and are able to function outside the nest location. Required setback distances for the no-disturbance zone shall be based on input received from the CDFW, and may vary depending on species and sensitivity to disturbance. As necessary, the no-disturbance zone shall be fenced with

temporary orange construction fencing if construction is to be initiated elsewhere in the APE.

4. A report of findings shall be prepared by the qualified biologist and submitted to the City for review and approval prior to initiation of construction during the nesting season (February 1 to August 31). The report shall either confirm absence of any active nests or should confirm that any young are located within a designated no-disturbance zone and construction can proceed. No report of findings is required if construction is initiated during the non-nesting season (September 1 to January 31) and continues uninterrupted according to the above criteria.

Implementation of this mitigation measure would ensure that impacts on special-status species would be less-than-significant.

2) **No Impact.** The APE does not contain any riparian habitat or other sensitive natural community types, and no effects are anticipated.

3) **No Impact.** The APE does not contain any federally protected wetlands and no effects are anticipated. Thus, pursuant to CEQA-Plus requirements, the Project is consistent with Executive Order 11990 – Protection of Wetlands. Because California does not have a Coastal Barriers Resources System, no impacts relative to the Coastal Barriers Resources Act will occur. All drainage within the APE is returned to the plant headquarters and would not affect any surrounding wetlands or waters.

4) **Less than Significant Impact.** The proposed Project would not have any significant adverse impacts on wildlife movement opportunities or adversely impact native wildlife nursery sites. Wildlife in the vicinity of the APE are already acclimated to human activity, and construction-related disturbance would not cause any significant impacts on possible bird nesting in the surrounding area. Species common to the area would continue to utilize the surrounding area, even during construction.

Pursuant to CEQA-Plus requirements, no essential fish habitat would be affected and the Project is consistent with the Magnuson-Stevens Fishery Conservation and Management Act.

5) **Less than Significant Impact.** Goals and policies specified in the City of San Jose General Plan address the protection of sensitive biological and wetland resources. There are no sensitive resources in the vicinity of the APE and no conflicts with the City's General Plan are anticipated as a result of Project implementation.

Based on current design the Project will result in the removal of 10 sapling ornamental trees in Process Area 73 and possibly one in the vicinity of the replacement flare. Consistent with the City's Tree Ordinance and Control Measure D1, the City will either replace the trees onsite or at other public project sites at a 1:1 ratio using 15-gallon containers or pay a fee to a non-profit organization that plants trees in San Jose. If other trees need to be removed, they will be replaced according to Control Measure D1. Final mitigation for impacts to protected trees will be determined by the City Planning Director. The impact is less than significant.

6) **No Impact.** No habitat conservation plans have been prepared addressing the APE, and the Project would therefore not conflict with any adopted habitat conservation plans. As a result, no impact would occur. The APE is located outside of the actual plan area for the SCVHP and is not a covered activity subject to the provisions of the SCVHP. The burrowing owl mitigation lands secured as part of the SCVHP are located over 750 feet to the southwest, and would not be affected by proposed construction activities within the APE.

Mitigation Measures

Mitigation measures other than D-1 not required.

E. CULTURAL RESOURCES

SETTING

A Phase I Cultural Resources Evaluation for the proposed Project was prepared by Archeo-Tec and is included in Appendix C.¹⁷ The reader is referred to the report for a detailed discussion of the Project setting and impact analysis. The Phase I evaluation includes an updated document review through the Northwest Information Center (NWIC) at Sonoma State University, consultation with the Native American Heritage Commission (NAHC) and interested Native American representatives, and a pedestrian surface survey of the APE.

Neither the records search nor the surface survey revealed any evidence of archaeological materials beneath the Project site. The Phase I Evaluation did document that one archaeological site (a shell midden site known as CA-SCL-528), is recorded in the records-search area, but outside of the current Project APE. The history of land use during both the prehistoric and historical periods indicates the possibility of subsurface cultural resources, but the likelihood of significant resources being present within the limited volume of the APE is minimal.

An important consideration in assessing potential cultural resource impacts is site subsurface conditions relative to depth of Project excavation activities. The Geotechnical Study for the Project determined that the amount of fill across the site to be about three to four feet but ranges to five to 10 feet at some locations.¹⁸ Shallow excavations within the fill are unlikely to encounter intact archaeological resources.

IMPACT ANALYSIS

Control Measures Incorporated by the City

E1. Should human remains be encountered, the following procedures shall be followed:

- Per the stipulations of the California Health and Safety Code Section 7050.5(b), the Santa Clara County Medical Examiner-Coroner's Office will be contacted immediately.

- The Coroner's Office has two working days in which to examine the identified remains. If the Coroner determines that the remains are Native American, then the Office will notify the NAHC within 24 hours.
- Following receipt of the Coroner's Office notice, the NAHC will contact a Most Likely Descendant (MLD). The MLD will then have 48 hours in which to make recommendations to the City and consulting archaeologist regarding the treatment and/or re-interment of the human remains and any associated grave goods.
- Appropriate treatment and disposition of Native American human remains and associated grave goods will be collaboratively determined in consultation between the appointed MLD, the consulting archaeologist and the City. The treatment of human remains may potentially include the preservation, excavation, analysis, and/or reburial of those remains and any associated artifacts.
- If the remains are determined not be Native American, the Coroner, archaeological research team, and the City will collaboratively develop a procedure for the appropriate study, documentation, and ultimate disposition of the historic human remains.

Significance Criteria

RESOURCE CATEGORY / SIGNIFICANCE CRITERIA	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact	Information Sources
E. <u>CULTURAL RESOURCES</u>					
Would the Project:					
1) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	5,11
2) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11,17,18,19
3) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature of paleontological or cultural value?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11,18,34
4) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	11,17

Discussion

1) **No Impact.** Based on the analysis completed for the Master Plan EIR, there are no buildings or structures within the RWF that have been previously identified as a historic resource as stated in the CEQA Guidelines Section 15064.5, or as a City Landmark.⁵ Two buildings

(Pump & Engine Building and the Training Center) largely retain their original appearance and with additional research may qualify as historical resources or a City Landmark upon further review. However, the proposed Project would not impact either of these buildings.

2) **Less than Significant with Mitigation Incorporated.** The APE map shows that much of Project excavation activities will be only two feet deep within the documented fill zone. The supports for the elevated pipe rack may require excavation to a five-foot depth, but borings indicate fill depth range from five to 10 feet over the alignment. Excavation for the pump station along the east side of DAFTs 1-6 will be five to six feet deep but this area has been previously disturbed by installation of RWF facilities to depths greater than that proposed.¹⁹ Accordingly, no potentially significant archaeological resources are likely to exist within these areas, and no mitigation is required.

Retrofitting the digester walls and installation of the sludge equalization tanks in Process Area 73 are the only Project component where excavation to depth will be required. Installation of the tanks in the currently landscaped area will require an excavation of about 65 feet long by 20 feet wide, and 10-12 feet deep. With only three feet of fill in this area, which is mostly undisturbed by previous construction activities, there would be about seven to nine feet of excavation within native, intact soils.¹⁸ Retrofitting the digester walls will require excavation eight feet from and along the walls and to a depth of 10 feet. Geotechnical borings indicate native soil within the top 10 feet and very little fill in this area. Because of the proximity of archaeological site CA-SCL-528, there is the possibility that archaeological materials that are either intact or displaced from another site may exist within this portion of the APE, causing a potentially significant impact.

Mitigation Measures

E-1. The following measures shall be followed for the protection of archaeological resources:

1. Full-time monitoring by an archaeologist of the digester and sludge equalization tank excavations for the first three days in each of these areas. Based on the initial observations regarding the depth of fill, any previous disturbance, and soil observation, the archaeologist will determine the necessity for and frequency of remaining monitoring in that area.
2. Should archaeological materials be encountered, work in the immediate find area should halt and an archaeologist would assess the potential significance of the find. If significant, the archaeologist shall develop a treatment plan in consultation with the City, the SWRCB, the State Historic Preservation Officer, and a qualified Native American monitor. This plan would likely entail a program of systematic data recovery in which cultural materials are documented and removed.

3) **No Impact.** The Project area is generally overlain by three to four feet of fill but fill depths of up to five to 10 feet are documented. Beneath the fill, the Project area is underlain by young Holocene-age geologic units consisting of deposits of mud and silt associated with the

present day estuary (Bay Mud) and the distal edges of alluvial fans.¹⁸ As discussed above, excavation would generally be limited to within two feet of the ground surface, and several instances to five to six feet with two activities to 10 to 12 feet. Artificially deposited fill and young Holocene-age geologic units do not have the potential to contain paleontological resources. For these reasons, in accordance with Society of Vertebrate Paleontology standards, there is a very low paleontological potential within the Project area and no impact will occur.

4) **Less than Significant.** As with most construction projects, the accidental discovery of human remains is a possibility. This is a potentially significant impact that is associated only with the deeper excavation of 10 to 12 feet associated with the retrofitting of the digester walls and the sludge equalization tanks in Process Area 73. However, Control Measure E1 has been incorporated into the Project to address this potential impact.

F. GEOLOGY AND SOILS

SETTING

A Geotechnical Study was prepared for the Project by Fugro Consultants, Inc.¹⁸ Relevant information is summarized below.

Site Geology and Seismicity

The RWF is located at the southern end of San Francisco Bay within Santa Clara Valley, which is an alluvial basin situated between the Santa Cruz Mountains to the southwest and the Diablo Range to the northeast. The general RWF area has been geologically mapped as containing fine-grained sand, silt, and clay. In addition, portions of the site contain highly compressible Young Bay Mud.

The Project site is located in the seismically active San Francisco Bay Area. The site is not located within an Alquist-Priolo Earthquake Fault Zone. The closest mapped fault to the Project site is the Hayward Fault located almost 10 miles to the east. A relatively deep strand of the Silver Creek Fault is believed to approach the Project area to the southeast, but the Silver Creek Fault is mapped by the State of California as inactive and highly unlikely for surface fault rupture. Earthquakes occurring along the Hayward Fault or other active faults in the regional area are capable of generating strong ground shaking at the Project site.

Settlement can occur as a result of seismic ground shaking due to liquefaction or densification of the subsurface soils. In both liquefaction and densification, ground shaking causes predominantly granular soils to become more compact, therefore occupying less volume and resulting in settlement. Soils most susceptible to liquefaction and densification are loose, clean, poorly graded, fine-grained sands. Liquefaction can occur where soils are saturated (submerged), and is accompanied by a temporary loss of strength (i.e., the soil “liquefies”). Densification can occur where the soils are unsaturated. The California Geological Survey has mapped the RWF site as an area where historical occurrences of liquefaction, or local geological,

geotechnical, and groundwater conditions, indicate a potential for permanent ground displacement.

The results of the Geotechnical Study indicate significant uncertainty as to the actual magnitude of total liquefaction-induced settlement at the Project site and the actual surface expression. This is due to the depth of liquefiable deposits at the site (greater than 60-70 deep), and the lack of appreciable settlements and/or liquefaction-induced settlements observed at the site following the 1989 Loma Prieta earthquake, despite liquefaction estimates of 1 to 2 inches of settlement. Other geologic hazards such as slope instability, lurching, or fault rupture are considered to be unlikely at the Project site due to the relatively flat terrain and the distance from a known active fault.

Subsurface Conditions

Subsurface conditions of the Project site consist primarily of medium to stiff lean clays. The surficial three to four feet contain artificial fill, likely associated with raising grades as part of the original RWF construction. The clayey surface soils encountered have a moderate expansion potential which is a consideration for foundation design.

Site Topography

The Project site is mainly flat with elevations ranging by a few feet. In the area of the digesters, surface grades vary from about +eight feet to +nine and one-half feet (NAVD88). At Process Area 73, the existing grass-covered landscape has surface elevations around +15 feet. Surface elevations along the pipe rack alignment average about +nine feet.

Groundwater

During the Geotechnical Study, the groundwater table was measured at a depth of 10 to 15 feet below ground surface or at elevations of -one and one-half to -one-half feet. Explorations by others have measured groundwater at elevations of +three to -11.3 feet. For purposes of the Geotechnical Study, groundwater was assumed to be situated at an elevation of +four feet, which would be at about four to five feet below ground surface in some areas of the Project site.

IMPACT ANALYSIS

Control Measures Incorporated by the City:

- F1. Include the recommendations of the Geotechnical Investigation into the design and construction specifications for the proposed Project.
- F2. Have a geotechnical engineer review Project plans and specifications prior to construction to verify that geotechnical aspects of the Project are consistent with the intent of the recommendations included in the Geotechnical Investigation.

- F3. Have a geotechnical engineer monitor foundation, earthwork, and excavation operations during construction.
- F4. Design and Construct the Project in conformance with the seismic requirements of the latest edition of the Uniform Building Code (UBC) with any modifications as contained in Contract Documents.
- F5. Contractor shall design sheeting, shoring, and bracing for trench excavation of five feet or more in depth in accordance with Article 6 of the Construction Safety Orders of CAL/OSHA and the California State Labor Code. The standards of design referred to in the Labor Code shall be those of CAL/OSHA.
- F6. Contractor shall submit a Water Pollution Control Plan (WPCP) to the City for approval prior to beginning any work. The WPCP must meet and contain the following requirements:
- a. Comply with the requirements set forth in the most recent version of the Erosion Control and Sediment Control Field Manual for California and the 2009 California Stormwater Quality Association (CASQA) Best Management Practice Handbook, Construction.
 - b. Ensure the Project site is protected during all storm events for the entire duration of the Project by implementing and maintaining temporary erosion and sediment control including, but not limited to, the following:
 1. Construction of any and all necessary systems required to eliminate contaminants from entering the storm system. Best Management Practices shall be used to cover all temporary erosion and sediment control situations that arise during construction, including unanticipated field conditions, and include use of the following:
 - Fiber roll
 - Silt fence
 - Inlet protection
 - Gravel bags
 - Headwall protection
 - Stabilized construction entrances and exits
 2. Clean up and control of work site materials, spoils, and debris.
 3. Removal of contaminants produced by equipment used for the construction of the Project.
 4. Prohibition of illicit discharge (non-rain water) into the storm system.

- c. Contractor shall be responsible for ensuring that all sub-contractors and suppliers are aware of all water pollution control measures and that they implement such measures.
 - d. Failure to comply with the stormwater quality regulations and specifications will result in the issuance of corrective notices, citations, fines, and/or a Project stop order.
 - e. Contractor shall assign a person responsible for Contractor's daily compliance with erosion and sediment control measures. The name of this person shall be on record with the City and Project Inspector, along with a phone number where they can be reached 24 hours a day.
- F7. Contractor shall transport any excavated contaminated materials, determined by visual observation or documented past release of contaminants in the work area, to a designated stockpile area at the RWF site as indicated in the Contract Documents. At the conclusion of the Project, the City will be responsible for disposal of the stockpiled contaminated materials. The following controls shall be implemented:
- a. The base of the stockpile area shall be prepared with a layer of asphalt, concrete, plastic, visqueen, or other impermeable material to separate the uncontaminated natural soil from the stockpiled contaminated soil.
 - b. Stockpiles shall be covered in accordance with BAAQMD requirements, including but not limited to Regulation 8 Rule 40.
 - c. Stockpiles shall be placed such that they are stable in the event of natural phenomena such as earthquakes and rainstorms.
 - d. All construction equipment used for the handling of contaminated material shall be decontaminated prior to use for other work elements or removal from site.
 - e. Contractor shall provide all temporary holding tank(s), oil/water/solids separators (s), pumping, piping, and any other necessary equipment to collect, transport, and pre-treat the contaminated liquid from the excavation and stockpiling areas prior to discharge to the RWF headworks.

Significance Criteria

RESOURCE CATEGORY / SIGNIFICANCE CRITERIA	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact	Information Sources
F. <u>GEOLOGY AND SOILS</u> Would the Project:					
1) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:					

RESOURCE CATEGORY / SIGNIFICANCE CRITERIA	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact	Information Sources
a) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		18,20
b) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		18,20
c) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		18,20
d) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	18,20
2) Result in substantial soil erosion, siltation, changes in topography and the loss of topsoil or unstable soil conditions from excavation, grading or fill?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	11
3) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	11,20
4) Be located on expansive soil, as defined in Table 16-I of the Uniform Building Code (2001), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	11,20
5) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11

Discussion

1a) **Less than Significant Impact.** The Project site is not located within an Alquist-Priolo Earthquake Fault Zone. The potential for fault rupture is unlikely considering the distance to a known active fault and the impact is less than significant.

1b,c,3) **Less than Significant Impact.** The Project site is within a seismically active region. Earthquakes occurring along mapped faults in the region are capable of generating strong ground shaking at the Project site. Although the RWF is within an area mapped by the California Geological Survey as having potential for liquefaction and permanent ground displacement, the Geotechnical Study finds significant uncertainty due to the depth of liquefiable deposits and observations during the Loma Prieta earthquake. Nevertheless, ground shaking and seismic-induced ground failure are important issues for this IS and are being addressed in Project design.

Criteria 1b, c and 3 relate to physical hazards the Project may cause or be exposed to during construction and operation. As discussed earlier, strong ground shaking during a seismic event may be expected at the Project site and liquefaction potential, though the risk remains uncertain, is a design issue. Project components that are particularly sensitive to these physical hazards include the added weight of digesters 5-8 due to the new fixed covers, the replacement flare, the new exterior gas and process pipe rack, improvements in Process Area 73, and the new electrical buildings. Control measures, however, have been included in the Project to address these issues. Control Measures F1-F3 provide for the ongoing involvement of a geotechnical engineer with incorporation of their recommendations into the Project plans and specifications. Inherent in the geotechnical recommendations is for the Project to be designed and constructed in conformance with the seismic design requirements of the latest edition of the UBC (Control Measure F4).

Ground caving can also be a physical hazard with projects that have deep excavations of greater than 5 feet. For the proposed Project, retrofitting the digester walls will require excavation of 10 feet in depth around each of the digesters. Construction of the new pumping facilities along the east side of DAFT tanks 1-6 will require excavation of five to six feet in depth, while excavation for the two new thickened sludge equalization tanks in Process Area 73 will require excavations of about 10-12 feet in depth. Control Measure F5 requires the Contractor to comply with Article 6 of the Construction Safety Orders of CAL/OSHA and the California State Labor Code which provides for sheeting, shoring, and bracing for trench excavations of five feet or more in depth. Thus, the impacts associated with physical hazards and Criteria 1b,c and 3 are less than significant.

1d) **Less than Significant Impact.** The Project area is within the central portion of the main processing area and has limited topographic relief. Elevations within the Project area span a differential of about six to seven feet.²⁰ Therefore, the potential for landslides on site, including seismically induced landslides, are unlikely.

2) **Less than Significant Impact.** Project construction involves relatively minor soil excavation and grading activities and fill placement. The main activities involve the

approximate 100 spread floating/piers for the pipe rack, and activities within Process Area 73 which will disturb an area of about 20,000 square feet. In the event of a rainstorm, erosion on site could occur with sediment from the Project area becoming entrained in storm water runoff. All site drainage remains on site and will be returned to the plant headworks.

The City has incorporated Control Measures F6 and F7 into the Project to address erosion and the management of excavated contaminated soil materials if encountered. These control measures will require the Contractor to utilize a variety of Best Management Practices to responsibly manage site operations during rainfall events and to assure City requirements are met prior to discharge of any storm water to the plant headworks. The impact is less than significant.

4) **Less than Significant Impact.** The clayey surface soils in the Project site have a moderate expansion potential, but do not represent a substantial risk to life and property. Control Measures F1-F3 will be incorporated into the Project to address deficiencies of site soils for construction.

5) **No Impact.** The Project would not utilize septic systems or other alternative disposal systems for disposal of wastewater. Therefore, no impact will occur.

Mitigation Measures

None required.

G. GREENHOUSE GAS EMISSIONS

SETTING

Atmospheric greenhouse gases (GHGs) play a critical role in determining the earth's surface temperature. The reader is referred to the Master Plan EIR for a thorough discussion of climate change and the greenhouse effect, the various gases that have been identified as drivers of climate change, and pertinent regulations. Among the prominent GHGs contributing to the greenhouse effect, or climate change, are carbon dioxide, methane, ozone, water vapor, nitrous oxide, and chlorofluorocarbons. Human-caused emissions of these GHGs in excess of ambient concentrations are responsible for enhancing the greenhouse effect.

Sources of GHG Emissions

The principal greenhouse gases generated by wastewater treatment plants are methane, nitrous oxides, and carbon dioxide which can be emitted directly by the wastewater treatment process or indirectly through the use of purchased electricity to power treatment processes. Wastewater treatment operations create unique sources of GHG emissions; this occurs through the processes used to biodegrade organic matter under anaerobic conditions and to remove nitrogen from wastewater.³⁹ Nationwide, wastewater treatment accounts for 2.5% of United States methane emissions and 1.6% of nitrous oxide emissions.²¹ Detailed GHG emission estimates for RWF operations were included in the Master Plan EIR. Biogas and natural gas

combustion constitute the largest percentage of estimated GHG emissions from wastewater treatment operations, followed by purchase electricity and methane emissions from biosolids lagoons.

There are two sources of GHG emissions, anthropogenic and non-anthropogenic (biogenic).

- **Anthropogenic.** Anthropogenic GHG emissions derive from the combustion of fossil fuels. Energy-related CO₂ emissions, resulting from fossil fuel excavation and use, account for about three-quarters of the human-generated GHG emissions in the United States, primarily in the form of CO₂ emissions from burning fossil fuels. Natural gas is an anthropogenic source of GHG emissions.
- **Non-anthropogenic (biogenic).** Non-anthropogenic emissions are derived from natural sources, including the natural decomposition of biomass and combustion of biomass or biomass-derived fuels. Non-anthropogenic CO₂ emissions do not act to increase the total amount of carbon in the atmosphere in the same way as carbon from fossil fuels.⁴⁸ Digester gas is an example of a non-anthropogenic source of GHG emissions.

Notably, in 2011, the City adopted the Envision San Jose 2040 General Plan (General Plan).²² As part of the General Plan update, the City adopted a Greenhouse Gas Reduction Strategy (City of San Jose 2011) in accordance with the BAAQMD CEQA Guidelines and CEQA guidelines Section 15183.5.⁴² The GHG Strategy identifies policies and measures to reduce GHG generation within the city.

IMPACT ANALYSIS

Control Measures Incorporated by the City.

G1. Implement Control Measure C6 and C7 for controlling exhaust emissions.

Significance Criteria

RESOURCE CATEGORY / SIGNIFICANCE CRITERIA	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Information Sources
G. <u>GREENHOUSE GAS EMISSIONS</u>					
Would the Project:					
1) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	11
2) Conflict with any applicable plan, policy or regulation of an agency adopted for the purposes of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	11

Discussion

1, 2) **Less than Significant Impact.** The proposed project is consistent with the City of San Jose's 2040 General Plan, the City's Greenhouse Gas Reduction Strategy, the Land Use/Transportation assumptions, and incorporates applicable features, such as substitution of fossil fuel with a renewable energy project, such as is being done with the recycling/re-use of digester gas. The use of digester gas as fuel in the cogeneration project would not result in any additional GHG emissions and thus would be compliant with BAAQMD thresholds for GHG emissions. Digester gas is a non-anthropogenic renewal gas, as discussed above. It would substitute for the use of anthropogenic natural gas. Use of digester gas for on-site power generation replaces the need for off-site electric power. Hence, the Project can be credited with avoided GHG emissions. The proposed Project would not increase any permanent traffic volume over current (baseline) conditions. Construction-related Project emissions would be limited due to its relatively limited construction intensity. Control Measures C6 and C7 will serve to control exhaust emissions.

The Project is also consistent with the State's 2014 Updated Climate Change Scoping Plan. This plan sets statewide emission reduction through the use of cleaner fuels, new standards that limit GHG emissions from cars and trucks and shifting away from fossil fuels for electric power generation. The Updated Plan documents progress made to date in terms of GHG emissions on a per capita basis. This decline is expected to continue to 2030 and beyond.

Mitigation Measures

None required.

H. HAZARDS AND HAZARDOUS MATERIALS

SETTING

This discussion of hazards and hazardous materials impacts gives consideration to the existing conditions at and near the plant site, as well as what workers and the general public would be exposed during construction and operation.

Database Searches

Database searches were conducted using the State Water Resources Control Board (SWRCB) GeoTracker database and the California Department of Toxic Substances Control (DTSC) EnviroStor database.^{23,24} The GeoTracker database includes the following hazardous materials site lists: leaking underground storage tank (LUST) cleanup sites; spills, leaks, investigation, and cleanup (SLIC) sites; permitted underground storage tank (UST) facilities; land disposal sites; military cleanup sites; and other cleanup sites. The EnviroStor database includes: federal Superfund; state response; voluntary cleanup; school cleanup; and hazardous waste corrective action. This Project area does not contain any hazardous material sites. The San Jose Police Department operates a bomb disposal facility within the inactive biosolids lagoon area, located to the north of the Project area.⁵

Hazardous Materials Survey Report

A Hazardous Materials Survey Report was completed for the proposed Project.²⁵ The purpose of the survey was to identify, sample and analyze potentially hazardous materials that may be disturbed so that appropriate precautions can be taken during demolition and construction for the protection of workers health and safety. Hazardous materials included asbestos-containing materials (ACM), lead-containing paints, Hexavalent Chromium, and Polychlorinated Biphenyl (PCBs). ACM, lead, and PCBs were identified at various locations within material and equipment in the Project area. The Hazardous Materials Survey Report provided recommendations for removal of these materials and for worker protection in compliance with regulatory agency requirements. These recommendations are included as a Project control measure below.

Process Hazard Analysis

A Process Hazard Analysis (PHA) is currently being prepared for the proposed Project.²⁶ A PHA provides a set of organized and systematic assessments of the potential hazards associated with an industrial process.

The PHA study will provide information to assist the City and Brown and Caldwell, the City's design consultant for the Project, in making decisions for improving safety and reducing the consequences of unwanted or unplanned releases of hazardous chemicals. The PHA will be directed toward analyzing potential causes and consequences of fire, explosions, releases of toxic or flammable chemicals and major spills of hazardous chemicals, and focus on equipment, instrumentation, utilities, human actions, and external factors that might impact the process. The

PHA will identify potential hazards and operational problems related to plant design and human error. Compliance with appropriate recommendations of the PHA is included as a Project control measure below.

IMPACT ANALYSIS

Control Measures Implemented by the City

- H1. Implement the recommendations of the Hazardous Material Survey Report for the Project which include:
- a. Removal of the identified ACM prior to the proposed Project activities by a licensed asbestos abatement contractor who complies with all applicable regulations.
 - b. Consult with a Certified Asbestos Consultant to assist with Project design and monitoring, including clearance inspection and air sampling after asbestos removal.
 - c. Removing the lead paint at spots scheduled for disturbance by the construction would eliminate the applicability of the CAL/OSHA standard to the paint. If the paint is not removed and the work will involve a CAL/OSHA trigger task (such as torch cutting), workers shall be protected during the initial exposure monitoring per the CAL/OSHA Lead Standard requirements as if they were exposed above the Permissible Exposure Limit, until actual exposures are determined. With torch cutting, for example, this includes providing supplied air respiratory protection during the initial exposure assessment.
 - d. Paint chips and other waste generated from the paint removal, as well as painted components destined for disposal, should be tested to determine if they are hazardous waste and disposed of accordingly.
 - e. Removal of PCB-containing caulk and contaminated soil shall follow requirements under 40 CFR 761.
 - f. Since concrete contains crystalline silica, disturbance of concrete requires compliance with CAL/OSHA 1530.1 and 5155.
- H2. If during the course of construction activities the Contractor identifies hazardous materials other than those identified in the Hazardous Material Survey Report (Control Measure G3) based on visual observations or documented past release of contaminants in the work area, the City shall be notified immediately and an appropriate remediation plan implemented in conformance with local, state, and federal regulations. Also, see Control Measure F7.
- H3. Provide at a minimum a desilting tank for treatment of groundwater from dewatering operations before discharge to the plant headworks (see Control Measure I3).

- H4. Contractor shall stockpile excavated contaminated soil on-site with appropriate Best Management Practices with disposal of the materials off-site by the City (see Control Measure F7).
- H5. The Contractor shall also submit, as applicable, the following:
- a. Material Safety Data Sheets (MSDS) for each hazardous substance proposal to be used prior to delivery to the Project site. Storage and handling of all hazardous materials will be in strict accordance with the MSDS for the materials.
 - b. Evidence that Contractor personnel have sufficient training and certificates in performing work such as confined space entry, asbestos material removal, welding, heavy equipment operation, and others.
 - c. Hot work program consistent with the City's ESD Hot Work Safety Program. A signed hot work permit must be obtained from the City for hot work including brazing, cutting, grinding, soldering, torch-applied roofing, and welding.
 - d. A Fall Prevention Program for working at heights, on ladders, or using fall protection equipment.
 - e. A Confined-Space Program consistent with the City's Confined-Space Program and the CCR, Title 8, Section 5156-5158 governing confined space entry.
 - f. Certificates that all cranes and hoists, forklifts, confined space rescue equipment, gas monitors, and welding tools or other equipment have been certified and tested for their operability and rated capacity.
 - g. Appropriate calculations such as for supporting seismic design for equipment support, shoring for deep soil excavating, and adequacy of check existing floor and structures for support of moving loads.
- H6. Implement appropriate recommendations of the PHA which address fires, explosions, releases of toxic or flammable chemicals and major spills of hazardous chemicals, for protection of worker and public health and safety.
- H7. The Contractor shall designate a Certified Industrial Hygienist who will develop and enforce the Health and Safety Plan (HSP).
- a. At the minimum, the HSP shall address the following:
 - 1. Contractor's plan to protect workers (such as providing personnel training, personal protective equipment, and respiratory protective devices) while working in the presence of contaminated or hazardous materials.
 - 2. Establishment of exclusionary site work zones and security measures.

3. Implementing and conducting dust control measures, ambient air monitoring for health and safety purposes, and administering contingency plans, if necessary.
 4. Emergency response protections including compliance with CAL/OSHA notification requirements and the RWF Emergency Control Center.
- b. The HSP shall be reviewed and signed by the Contractor and all personnel, including subcontractors, who will be engaged in or overseeing work in the contaminated construction zones.
 - c. A copy of the HSP shall be reviewed by all personnel working in the contaminated areas, including personnel not employed by the Contractor or his subcontractors.
 - d. No worker shall be allowed in these areas until he/she has signed and acknowledged receiving and understanding a copy of the HSP.
 - e. The Contractor shall be responsible to make sure that all personnel performing work in the identified, potentially contaminated area(s) must have read and clearly understands the HSP.
 - f. The HSP shall conform to the requirements of all local, state, and federal ordinances, rules, regulations, and guidelines concerning occupational health and safety issues, including OSHA Regulation 29 Code of Federal Regulations (CFR) 1910.120.
- H8. When modifications, additions, connections, and abandonment are made to existing water and sewer mains, services, fire lines, and fire hydrants, the Contractor shall contact the respective City Department for notifications and/or required procedures.
- H9. Contractor shall provide advance notice to and utilize services of Underground Service Alert for location and marking of underground utilities operated by utility agencies other than the City.
- H10. During demolition activities, the Contractor shall:
- a. Provide temporary six feet tall chain link fencing around each work area and signage to include unauthorized personnel and vehicles. Fencing design and signage subject to City review.
 - b. Provide interior and exterior shoring, bracing, or supports to prevent movement, settlement, or collapse of structures to be partially or completely demolished, and to adjacent structures or other facilities to remain.
 - c. Protect and maintain conduits, drains, sewers, pipes, and wires that are to remain on the property.

Significance Criteria

RESOURCE CATEGORY / SIGNIFICANCE CRITERIA	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact	Information Sources
H. <u>HAZARDS AND HAZARDOUS MATERIALS</u>					
Would the Project:					
1) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	11,25,26
2) Create a significant hazard to the public, or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment or risk explosion?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	11,25,26
3) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11
4) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11,23,24
5) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport, would the Project result in a safety hazard for people residing or working in the Project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11
6) For a project within the vicinity of a private airstrip, would the Project result in a safety hazard for people residing or working in the Project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11
7) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11
8) Expose people or structures to significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11,27,28

Discussion

Potential adverse impacts related to hazards and hazardous materials are discussed below. It should be noted that an important component of the Project is the construction of an external, elevated pipe rack to collect digester gas from the entire digester campus. This will allow removal of low-pressure gas piping and some other hazardous systems from the RWF tunnel system which does have worker access. This is a beneficial impact of the proposed Project.

1, 2) **Less than Significant Impact.** There are four general categories of health and safety impacts to workers and the public within the category of hazards and hazardous materials. These include the following:

- HAZ-1. Exposure of workers to hazardous materials associated with site equipment and conditions
- HAZ-2. Use of standard hazardous materials
- HAZ-3. Accidental fires, explosions, release of toxic or flammable chemicals, and major spills of hazardous chemicals
- HAZ-4. Exposure to physical hazards

Impact HAZ-1. A Hazardous Material Survey Report has been completed for the Project.²⁵ This investigation determined that workers would be exposed to selected hazardous materials during demolition and construction activities. Without controls, significant impacts to worker health and safety could occur. However, Control Measure H1 provides for recommendations of the Hazardous Material Survey Report, which are consistent with regulatory agency requirements, to be incorporated into the Project. Control Measure H2 will require the Contractor to alert the City and develop an appropriate remediation plan if previously unidentified hazardous materials are identified during construction based on visual observations or documented past release of contaminants in the work area. Thus, this impact is less than significant.

Workers may also be exposed to contaminated groundwater and soil during construction activities. These materials may or may not be hazardous in nature. Recovered groundwater will be given appropriate treatment by the Contractor prior to discharge to the plant headworks, as specified in Control Measure H3 (See Control Measure I3.) Excavated contaminated soils shall be handled according to Control Measure H4 (See Control Measure F7) with off-site disposal by the City. This impact is also less than significant.

Impact HAZ-2. This potential impact relates to public health and environmental hazards through the routine transport, use, or disposal of hazardous materials during construction and operation of the Project. The following types of materials will be routinely used or disposed of during construction and operation.

- Fuels, lubricants, paints, and degreasers
- Polymers as a thickening aid for the DAFTs
- Inert media and activated carbon use, replacement and disposal from the odor control facility
- Stack emissions from the replacement flare
- New stack emissions from the odor control facility

Fuels, lubricants, paints, and degreasers are the only materials that are hazardous in nature and are routinely used in construction and operational activities at the plant. Control Measure H5(a) requires storage and handling of all hazardous materials be in strict accordance with the MSDS for the materials. Polymers and inert media are not hazardous materials, and while activated carbon can contain elevated levels of constituents which are hazardous in nature, this material will be replaced and disposed of by a licensed contractor. The replacement flare does not represent a new source of emissions and both these emissions and those from the odor control facility stack will be regulated by the BAAQMD.

Impact HAZ-3. This impact relates to accidental occurrence of fires, explosions, release of toxic or flammable chemicals and major spills of hazardous chemicals that could impact worker and the public's health and safety, and the environment. The Project includes upgrade to existing digester and DAFT facilities, a replacement flare system, and construction of limited new facilities that will support the upgrades and provide for odor control. The Project is consistent with existing facilities and operations and likely does not constitute a significant new risk relative to Impact HAZ-3. However, Control Measure H6 will be incorporated into the Project which provides for implementation of appropriate recommendations of the PHA and focuses on equipment, instrumentation, utilities, human actions, and external factors which might result in potential hazards and operational problems. As a result, Impact HAZ-3 is less than significant.

Impact HAZ-4. Impact HAZ-4 relates to physical hazards associated with demolition and construction activities. Physical hazards relates to such items as exposure and use of heavy equipment; hot work such as brazing, soldering, and welding; working at heights; confined space entry; and collapse of structures during demolition. Without controls, significant health and safety impacts could occur. However, control measures have been included in the Project to address these issues. Control Measure H7 provides for the Contractor to develop and implement a HSP that complies with local, state, and federal requirements concerning health and safety issues, including emergency procedures. Control Measure H5 requires a Contractor to implement a variety of additional measures for worker health and safety, including worker training, Hot Work Safety Program, a Fall Prevention Program, a Confined-Space Program, and certificates for equipment operability. Control Measure H8-H10 requires the Contractor to take the necessary precautions when underground utilities may be affected and during demolition

activities. As a result, Impact HAZ-4 is less than significant, as are all impacts related to Criteria H1 and H2.

3) **No Impact.** There are no schools within one-quarter mile of the Project area. Therefore, there would be no impact related to this criterion.

4) **No Impact.** The Project area is not listed on a regulatory agency list of hazardous materials sites.^{23,24} There would be no impact related to this criterion. The potential for encountering contaminated groundwater during construction activities and associated control measures were discussed under Criteria H1 and H2.

5,6) **No Impact.** The Project area is not located within an airport land use plan, within two miles of a public airport, or within the vicinity of a private airstrip. The nearest airports to the Project area are the Norman Y. Mineta San Jose International Airport located about three miles south and the Moffett Federal Airfield located about six miles west. Because the Project area is more than two miles from an airport and the Project would not involve construction of facilities greater in height than existing facilities, there would be no impact related to safety hazards in the vicinity of an airport.

7) **No Impact.** Santa Clara County does not have an adopted emergency response plan or evacuation plan that designates specific emergency response or evacuation routes in the Project area. Therefore, no impact would occur relative to this criterion.

8) **No Impact.** The Project area is not located within identified high fire hazard areas, based upon fire hazard mapping by the CAL FIRE Forest Resource Assessment Program and the Santa Clara County Wildland Fire Interface Map.^{27,28} No impact is associated with wildland fires. The fire risk of the Project and associated control measures were discussed under Criteria H1 and H2.

Mitigation Measures

None required.

I. HYDROLOGY AND WATER QUALITY

SETTING

Water Resources

The nearest surface waters to the Project area include Coyote Creek and Guadalupe River, as well as sloughs, marshes, and ponds associated with the southern margin of the Bay (Figure 1-1). All stormwater drainage from the main operations area of the RWF is contained and routed to the plant headworks, so there is no direct discharge of stormwater from the Project area to natural areas.

Pursuant to the CEQA-Plus requirements, the SWRCB must assess the proposed Project relative to the federal Wild and Scenic Rivers Act of 1968. There are no federally-designated

wild and scenic rivers within Santa Clara County. The closest such rivers are the Merced River and Lower American River.⁴⁶ Thus, the Project is in compliance with the Wild and Scenic Rivers Act.

The Project area and most of the RWF property is located in the 100-year flood zone AE, as defined by the Federal Emergency Management Agency (FEMA). This flood zone has a 1% annual chance of flooding. In Zone AE, the base flood elevation is 12.0 feet.²⁹

The City is currently working with the agencies involved in the South Bay Shoreline Study to implement coastal flood protection for the 100-year flood event along the existing southern and eastern levees impounding Pond A18.⁵ Once in place, according to current design concepts, the levee would provide protection for the 100-year flood event through the 50-year period of analysis (2017-2067), including consideration of sea level rise based on U.S. Army Corps of Engineers' NRC Curve III scenario.³⁰ However, the proposed coastal flood protection would be implemented under a separate project by a separate agency, and there is some uncertainty regarding the timing of completion of that project. In the interim, the Project would be susceptible to 100-year flooding.

The Project area overlies the groundwater aquifer of the Santa Clara Valley Groundwater Basin. During the Geotechnical Study, the shallow groundwater table was measured at a depth of 10 to 15 feet below ground surface or at an elevation of -one and one-half to -one-half feet (NAVD88).¹⁸ Exploration by others have measured groundwater at elevations of +three to -11.3 feet. For purposes of the Geotechnical Study, groundwater was assumed to be situated at an elevation of +four feet, which would be about four to five feet below ground surface in some areas of the Project site.

Projects seeking funding from the SWRCB SRF Loan Program must also comply with the Safe Water Drinking Act and document whether or not a project has the potential to contaminate a sole source aquifer. The Santa Clara Valley Groundwater Basin is not a designated sole source aquifer. There are four such aquifers in California with the closest being in Scotts Valley.⁴⁷ The Project is in compliance with the Safe Water Drinking Act.

Regulatory Setting

General Construction Permits. Construction activities disturbing 1-acre or more of land are subject to the permitting requirements of the National Pollutant Discharge Elimination System (NPDES) General Construction Activity Permits for Discharge of Stormwater Runoff Associated with Construction Activity (General Construction Permit). The General Construction Permit requires preparation of a Stormwater Pollution Prevention Plan (SWPPP). The proposed Project, however, would disturb only about 0.7 acre of land, thus requirements of the General Construction Permit would not apply. The City would require the Contractor to prepare and implement a WPCP for erosion and sediment control, as discussed later in this section.

Regional Stormwater Permit. In 2009, the San Francisco Bay RWQCB issued a regional NPDES permit (NPDES Permit Order R2-2009-0074, NPDES Permit No. CAS612008) for stormwater consolidating requirements for all Bay Area municipalities and flood control

agencies that discharge directly to the San Francisco Bay. Some provisions require regional action and collaboration, but others relate to specific municipal activities over which the municipalities have individual responsibility and control, such as with the City's proposed Project. Pursuant to permit conditions that create, add, or replace 10,000 square feet or more of impervious surface area are required to control post-development stormwater runoff through source control, site design, and treatment control Best Management Practices. The proposed Project will create more than 10,000 square feet of impervious surface area and the City will require the Contractor to implement Best Management Practices as detailed in the WPCP for sediment and erosion control. The treated wastewater discharges from the RWF are regulated under Order No. R2-2009-0038 and NPDES Permit No. CA0037842 issued by the San Francisco Bay RWQCB. The NPDES permit also covers stormwater discharges from within the WPCP.

City Municipal Code. City Municipal Code 17.08 covers the requirements for building in various types of flood zones. This includes requirements for elevation, fill, flood passage, floodproofing, maximum flow velocities, and utility placement for multiple types of development including mobile homes, subdivisions, etc., located in a flood plain.

IMPACT ANALYSIS

Control Measures Incorporated by the City:

11. Contractor shall submit a WPCP to the City for approval prior to beginning any work (Control Measure F6).
12. Contractor shall manage any excavated contaminated soils or liquid in accordance with the Contract Documents (Control Measure F7).
13. Contractor shall implement a City-approved dewatering system as necessary to keep excavations reasonably free from water during construction. The dewatering system plans shall be in sufficient detail to indicate power source, sizes of pumps, piping, appurtenances, placement of wells, settlement monitoring program, and the ultimate disposal point for water. The dewatering system shall also show means of evaluating drawdown in real-time (e.g. piezometers). The dewatering system shall be consistent with the Contractor-designed shoring and bracing method. At a minimum, provide a desilting tank for treatment of all groundwater effluent before discharge to the RWF headworks. Also, see Control Measure F7(e).
14. Comply with relevant provisions of City Municipal Code 17.08 relative to standard floodproofing requirements for new non-residential structures. The lowest floor level of new Project facilities, except for the equipment pads around the digesters and the new DAFT pumps, will have a minimum design elevation of 13.00 feet NAVD 88, or one-foot above the 100-year flood.

Significance Criteria

RESOURCE CATEGORY / SIGNIFICANCE CRITERIA	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Information Sources
I. <u>HYDROLOGY AND WATER QUALITY</u>					
Would the Project:					
1) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8,11
2) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of preexisting nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	11,18
3) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on or off site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8,11
4) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8,11
5) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8,11
6) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	11
7) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11
8) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	11,29

RESOURCE CATEGORY / SIGNIFICANCE CRITERIA	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Information Sources
9) Expose people or structures to a significant risk of loss, injury or death involving flooding as a result of the failure of a levee or dam, or inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	11
10) Expose people or structures to a significant risk of loss, injury, or death involving inundating by seiche, tsunami, or mudflow.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	5,11

Discussion

1,3-6) **Less than Significant Impact.** Criteria 1 and 3-6 address water quality and drainage impacts. These potential impacts are quite similar in the context of the proposed Project.

As discussed above, all drainage from the 175-acre RWF main operations area is directed to the plant headworks when it undergoes treatment with the incoming raw wastewater flow. The RWF treats an average of 110 million gallons of wastewater per day, and has the capacity to treat up to 167 mgd.³¹

As discussed in the Project Description, many Project activities only involve rehabilitation of existing structures. The potential for erosion from new construction was discussed in Section F, under Criterion F2. It was noted Project construction activities involve relatively minor soil excavation and grading activities and fill placement, and the existing drainage patterns will be maintained. In the event of a rainstorm, erosion or sedimentation could occur with sediment from the Project area becoming entrained in stormwater runoff. Control Measure I1 (see Control Measures F6 (mgd)) requires the Contractor to develop and implement a WPCP with BMPs to control erosion and sedimentation. If contaminated soils or liquids are encountered during construction, they will be managed by the Contractor according to the Contract Documents as indicated by Control Measure I2 (see Control Measure F7). From an operations standpoint, the Project is a minor source of new water quality pollutants associated with maintenance and operation at the RWF. Based on the controls in place, and surface drainage will be returned to the plant headwork where the flow will undergo treatment, any new runoff from the construction and operation of the Project would represent a negligible contribution of flow and pollutants to the incoming RWF raw wastewater flow. Thus, water quality and drainage impacts are less than significant.

2) **Less than Significant Impact.** Two sources of groundwater depletion could occur. One would be due to pumping or extraction of groundwater. The second could be due to installation of new impervious surfaces, thus preventing infiltration of rainfall into the subsurface.

The Geotechnical Study does not anticipate the need for a large scale dewatering operation to facilitate the installation of the new foundation systems, so dewatering is not considered to be a significant issue.¹⁸ Because groundwater levels can fluctuate, Control

Measure I2 would be implemented for installation of a City-approved dewatering system as necessary to keep excavations reasonably free from water during excavation. A dewatering system would affect shallow groundwater at the site and would not substantially deplete groundwater supplies.

New construction in Process Area 73 represents the main new impervious surface associated with the Project. The area could measure about 20,000 square feet or 0.46 acres. Given this small surface area, that groundwater aquifers in the Santa Clara Valley Groundwater Basin are generally recharged in upland areas and flows down toward the Bay, and that the Project area is underlain by layers of Young Bay Mud which is relatively impermeable, there would not be a substantial effect on groundwater recharge.

7) **No Impact.** The Project would not involve construction of any housing. Therefore, no impact would occur.

8) **Less than Significant Impact.** The 100-year floodplain is wide and expansive in the vicinity of the Project area.²⁹ While the Project would be located entirely within the floodplain, limited new structures will be constructed which would have a negligible effect relative to impeding or redirecting flood flows.

9) **Less than Significant Impact.** The Project would not include any construction on, adjacent to, or within a levee, dam, or other flood control feature, so therefore would not directly affect such facilities. The Project does involve upgrade of existing facilities and construction of limited new facilities in an area not currently protected from 100-year flooding. Additionally, sea level rise could exacerbate flooding on site over time. Implementation of the South Bay Shoreline Project will provide coastal flood protection for the 100-year flood event, including consideration of sea level rise. The timing of this Project is uncertain, thus in the interim the Project area would be susceptible to 100-year flooding. The City shall comply with relative provisions of the Municipal Code 17.08 for floodproofing new non-residential structures (Control Measure I4), which will entail elevating the lowest floor level of most new structures to 13.00 feet or one-foot above the 100-year flood level. The equipment pads around the digesters will not be elevated above the flood level due to creation of access and maintenance issues, nor will the new DAFT pumps, as suction conditions and overall design would be affected. Impacts relative to impeding or redirecting flood flows are less than significant.

Pursuant to CEQA-Plus requirements, the Project would also be in compliance with Executive Order 11988 (Floodplain Management). To the extent feasible, the lowest floor elevation of most new structures will be one-foot above the 100-year flood level. As discussed above, the RWF site will be protected from the 100-year flood once the South Bay Shoreline Project is implemented.

10) **Less than Significant Impact.** The Project area is not located immediately adjacent to an enclosed water body, such that it would be affected by a seiche, nor is the area susceptible to mudflows. Tsunamis would not affect the Project area based on modeling completed for the Master Plan EIR.⁵

Mitigation Measures

None required.

J. LAND USE AND PLANNING

IMPACT ANALYSIS

Control Measures Incorporated by the City

None.

Significance Criteria

RESOURCE CATEGORY / SIGNIFICANCE CRITERIA	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Information Sources
J. <u>LAND USE AND PLANNING</u>					
Would the Project:					
1) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11
2) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1,2,11
3) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11,34

Discussion

1) **No impact.** The Project is within the main operations area of the RWF and would not divide an established community.

2) **No Impact.** The Project area and the RWF is zoned Heavy Industrial (HI) with a City General Plan designation of Public/Quasi-Public, a category used to designate public land uses such as water treatment facilities and the bufferlands.^{1,2} The proposed Project would be consistent with existing zoning and land use designations. No impact will occur.

Pursuant to CEQA-Plus requirements, the Project is not within the Coastal Zone, nor subject to the requirements of the Bay Conservation and Development Commission, and thus provisions of the Coastal Zone Management Act do not apply.

3) **No Impact.** As discussed in Section D of this chapter, the Project area is outside the actual plan area of the SCVHCP, so the Project is not a covered activity under the SCVHCP. Therefore, the Project would not conflict with the SCVHCP and no other habitat conservation plans or natural community conservation plans are applicable to the Project area. No impact will occur.

Mitigation Measures

None required.

K. MINERAL RESOURCES

SETTING

The Project area is not within an aggregate resource area according to the California Division of Mines and Geology and the United States Geological Survey Mineral Resources Data System.^{32,33} Borings completed for the Geotechnical Study confirmed subsurface conditions consist primarily of medium stiff to stiff lean clays, and too fine-grained to be suitable as aggregate.¹⁸

IMPACT ANALYSIS

Control Measures Incorporated by the City

None.

Significance Criteria

RESOURCE CATEGORY / SIGNIFICANCE CRITERIA	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Information Sources
K. <u>MINERAL RESOURCES</u>					
Would the Project:					
1) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11,18,32,33
2) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11,32,33

Discussion

1, 2). **No Impact.** The Project would not result in the loss of a mineral resource. No impact would occur.

Mitigation Measures

None required.

L. NOISE

SETTING

There are no known sensitive receptors (residences, schools) in the immediate vicinity of the Project area. The Project area is within the central portion of the RWF main processing area (Figure 1-1). No known noise complaints have been received by the City due to construction or operation at the RWF.⁴¹ The closest residential receptors to the Project area are located in the Alviso Village area which is about 0.9 mile to the west.

The City's General Plan includes several policies applicable to all development projects in San Jose³² These include the following:

- Minimize the noise impacts of new development on land uses sensitive to increased noise levels (Policy EC-1.2);
- Mitigate noise generation of new non-residential land use to 55 decibels (dB) at the property line when located adjacent to existing or planned noise sensitive residential and public/quasi-public land uses (Policy EC-1.3); and requiring new development to minimize vibration impacts to adjacent uses during demolition and construction (Policy EC-2.3). However, because the Project area is within the main processing area of the RWF, and there are no sensitive land uses adjacent to the facility, these General Plan policies would not apply.

The San Jose Municipal Code and the Zoning Ordinance contain the following requirements:

- San Jose Municipal Code §20.100.450: Limits construction hours within 500 feet of residences to 7 AM to 7 PM weekdays, with no construction on weekends and holidays; and
- City of San Jose Zoning Ordinance: The City Zoning Ordinance applies specific noise standards to Residential Zoning Districts, which limits the sound pressure levels generated by any use or combination of uses at any property line to a maximum noise level of 55 dB.

As with the General Plan policies, however, the Municipal Code and Zoning Ordinance would not apply because of the lack of any residential land uses in close proximity to the Project area.

IMPACT ANALYSIS

Control Measures Incorporated by the City

- L1. Between 7 AM to 7 PM noise from the Contractor's construction activities shall not exceed 86 dBA at a distance of 50 feet from the noise source.

Significance Criteria

RESOURCE CATEGORY / SIGNIFICANCE CRITERIA	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Information Sources
L. NOISE					
Would the Project result in:					
1) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	11
2) Exposure of persons to, or generation of, excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	11
3) A substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11
4) A substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	11
5) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11
6) For a project within the vicinity of a private airstrip, would the Project expose people residing or working in the Project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11

Discussion

1,2,4) **Less than Significant Impact.** The Project will generate varying levels of construction noise and vibration depending on the construction activity occurring during the almost 3-year construction schedule and the equipment in use. Project activities will occur within the central

portion of the plant's main processing area. Control Measure L1 will limit noise generation from a given source, and any increase in vibration levels will be localized and remain on-site. Noise would be attenuated by distance (7.5 dB for every doubling of distance to the nearest residential land use (0.9 miles to the west) and by shielding afforded by existing plant structures. There will be no increase in operational noise levels due to the Project. As a result, temporary increases in construction noise and vibration will be less than significant.

As shown on Figure 1-7 in Chapter 1, Introduction and Project Description, the construction schedules of several other Plant Master Plan projects will overlap the construction schedule of the proposed Project, creating the potential for cumulative impacts. However, the RWF has not received any noise complaints in the past due to construction or operational activities, and for the reasons cited above, potential cumulative impacts will also be less than significant.

3) **No Impact.** The Project includes upgrades to existing equipment and facilities and limited new construction with no increase in operational noise over existing levels.

5,6) **No Impact.** The Project area is not located in proximity to a public airport or private airstrip. The closest facility is the Norman Y. Mineta San Jose International Airport at a distance of five miles. The Project would not be affected by aircraft noise.

Mitigation Measures

None required.

M. POPULATION AND HOUSING

IMPACT ANALYSIS

Control Measures Incorporated by the City

None.

Significance Criteria

RESOURCE CATEGORY / SIGNIFICANCE CRITERIA	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Information Sources
M. POPULATION AND HOUSING					
Would the Project:					
1) Induce substantial population growth in an area, either directly (for example, by proposing new homes and business) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	11

RESOURCE CATEGORY / SIGNIFICANCE CRITERIA	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Information Sources
2) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11
3) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11

Discussion

1-3) **No Impact.** The Project is envisioned by the City as the backbone of a major anaerobic digestion process conversion at the RWF. The Project will not induce substantial population growth in the area and will not displace housing or people. Pursuant to CEQA-Plus requirements, the Project will have no effect on minority or low-income populations (Executive Order 12898 - Environmental Justice).

Mitigation Measures

None required.

N. PUBLIC SERVICES

SETTING

The San Jose Fire Department (SJFD) provides fire protection services for the city. The SJFD responds to all fires, hazardous material spills, and medical emergencies in the city including the RWF. The San Jose Police Department provides police services for the city.

IMPACT ANALYSIS

Control Measures Incorporated by the City

None.

Significance Criteria

RESOURCE CATEGORY / SIGNIFICANCE CRITERIA	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Information Sources
N. PUBLIC SERVICES					
Would the Project:					
1) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:					
a) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	11
b) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11
c) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11
d) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11
e) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11

Discussion

Potential adverse impacts to public services are discussed below. As discussed in Project Description, the Project includes construction of an elevated pipe rack to collect digester gas from the entire digester campus. This will allow removal of low-pressure gas piping and some other hazardous systems from the RWF tunnel system which does have worker access. This existing system is not in conformance with industry guidelines for prevention of explosions and fire and, as discussed in Section H, the Project would result in a beneficial impact to worker health and safety. By eliminating this risk, there would also be a potential benefit to emergency service such as SJFD.

1a) **Less than Significant Impact.** Components of the project include upgrades and improvements to the anaerobic digesters, DAFTs, and digester gas system (pipe rack); digester process conversion; odor control system; and replacement of existing flares. Emergency response to the Project area would be provided by SJFD which maintains two hazardous incident teams, a rescue medic, and a foam unit, as well as other standard facilities and equipment. These existing resources are anticipated to be sufficient to manage potential fire and other incidents on site. The Project would not result in new construction and operation activities that would drive increased demand for fire protection. Thus, the Project would not adversely affect fire department response times, and additional facilities or equipment would not be required.

1b-e) **No Impact.** The Project is a major anaerobic digestion process conversion of the RWF, and includes upgrades to existing facilities and construction of limited new facilities. These

facilities would not require additional police protection or response, need for schools, demand for parks, or need for other public facilities.

Mitigation Measures

None required.

O. RECREATION

SETTING

There are no recreational facilities in the immediate vicinity of the Project area.

IMPACT ANALYSIS

Control Measures Incorporated by the City

None.

Significance Criteria

RESOURCE CATEGORY / SIGNIFICANCE CRITERIA	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Information Sources
O. <u>RECREATION</u> Would the Project:					
1) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11
2) Include recreational facilities or require the construction of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11

Discussion

1,2) **No Impact.** The Project would be constructed and operated within the main operations area of the RWF and would have no effect on existing recreational facilities or require the construction of new facilities.

Mitigation Measures

None required.

P. TRANSPORTATION/TRAFFIC

A focused Transportation Impact Analysis (TIA) for the proposed Project was prepared by Fehr & Peers and is included in Appendix E. The reader is referred to the report for a detailed discussion of the Project setting and impact analysis.

SETTING

Regional access to the RWF site is provided by SR 237 and I-880, while local access is primarily provided via Zanker Road and Los Esteros Road (Figure 1-1). Along the perimeter of the RWF site, both Zanker Road and Los Esteros Road are signed bike routes that connect with a paved bike path that runs parallel to SR 237 starting at the Zanker Road / SR 237 westbound ramp intersection, and continuing east towards the northern stretch of Coyote Creek Trail/Bay Trail. The bicycle facilities along the stretch of Zanker Road and Los Esteros Road are part of the San Francisco Bay Trail. No sidewalks and transit services are provided along the perimeter of the RWF site.

The TIA provides an intersection analysis of the following two signalized intersections:

- Zanker Road / SR 237 Westbound Ramps
- Zanker Road / SR 237 Eastbound Ramps

The operation of a local roadway network is commonly measured and described using a grading system called Level of Service (LOS). The LOS grading system qualitatively characterizes traffic conditions associated with varying levels of vehicle traffic, ranging from LOS A (indicating free-flow traffic conditions with little or no delay experienced by motorists) to LOS F (indicating congested conditions where traffic flows exceed design capacity and result in long delays). This LOS grading system applies to both roadway segments and intersections. Currently, congestion also can be measured by a volume to capacity (V/C) ratio. The Zanker Road intersections operate at LOS B or better.

IMPACT ANALYSIS

Control Measures Incorporated by the City

P1. Implement a Coordinated Transportation Management Plan. Implementation of a Coordinated Transportation Management Plan was a mitigation measure included in the PMP EIR and has been incorporated into the Project by the City as a control measure. Prior to construction, the City's contractor(s) shall develop a Coordinated Transportation Management Plan and work with other projects' contractors and appropriate City departments (e.g., Emergency Services, Fire, Police, Transportation) to prepare and implement a transportation management plan for roadways adjacent to and directly affected by the Project as well as planned RWF improvements and land uses, and to address the transportation impact of the overlapping construction projects within the vicinity of the Project in the region. The transportation management plan shall include, but not be limited to, the following requirements:

- Coordination of individual traffic control plans for the Project with nearby projects.
- Coordination between the Project contractor and other project contractors in developing circulation and detour plans that include safety features (e.g., signage and flaggers). The circulation and detour plans shall address:
 - Full and partial roadways closures
 - Circulation and detour plans to include the use of signage and flagging to guide vehicles through and/or around the construction zone, as well as any temporary traffic control devices
 - Bicycle/pedestrian detour plans, where applicable
 - Parking along public roadways
 - Haul routes for construction trucks and staging areas for instances when multiple trucks arrive at the work sites
- Protocols for updating the transportation management plan to account for delays or changes in the schedules of individual projects.
- A comprehensive and continual outreach program to notify affected citizens (i.e. residents of Alviso, commuters, etc.) of all construction activity and roadway closures for the duration of the projects.

Significance Criteria

RESOURCE CATEGORY / SIGNIFICANCE CRITERIA	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Information Sources
P. <u>TRANSPORTATION/TRAFFIC</u>					
Would the Project:					
1) Exceed the capacity of the existing circulation system, based on an applicable measure of effectiveness (as designated in a general plan policy, ordinance, etc.), taking into account all relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	44

RESOURCE CATEGORY / SIGNIFICANCE CRITERIA	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Information Sources
2) Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	44
3) Result in a change in air, rail or water-borne traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11
4) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11
5) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11
6) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	11

While both of the study intersections are part of the Santa Clara Valley Transportation Authority Congestion Management Program (CMP), the City of San Jose has established a minimum acceptable operating level for all intersections including CMP designated intersections. The City of San Jose's 2040 General Plan defines LOS D as the minimum acceptable LOS operations.²² Therefore, both intersections were analyzed based on the City's LOS standard.

A significant project impact to a signalized intersection relative to IS Checklist Criteria P1 and P2 would generally occur if the Project results in one of the following:

- Operations degrade from an acceptable level (LOS D or better) under without Project Conditions to an unacceptable level (LOS E or F) under with Project Conditions.
- Unacceptable operations (LOS E or F) are exacerbated by increasing the critical delay by V/C ratio by 0.01 or more.
- The V/C ratio increases by 0.01 or more at an intersection with unacceptable operations (LOS E or F) when the change in critical delay is negative (i.e., decreases). This can occur if a critical movements change.^d

^d Generally, critical movements are a pair of conflicting movements for each start that have the highest volume-to-saturation ratio or green time-to-cycle ratio. As volumes at intersections change, the critical movements can change.

For the proposed Project, however, the latter two criteria do not apply, as both study intersections operate at LOS B or better.

Discussion

1,2) **Less than Significant Impact.** Construction of the Project would involve daily worker trips and truck trips to and from the construction site. As discussed in the TIA, under conservative assumptions there would be a total of 80 trips during the morning peak hour (65 inbound/15 outbound) and 80 trips during the evening peak hour (15 inbound/65 outbound). For the capacity analysis, a passenger car equivalent (PCE) of two was applied to the truck traffic, increasing the morning peak hour to 110 trips (80 inbound/30 outbound) and the evening peak hour to 110 trips (30 inbound/80 outbound).

The study scenarios used in the TIA include the following:

Scenario 1: Background Conditions-Existing volumes plus traffic from “approved but not yet built or occupied” developments near the Project site (obtained from the PMP EIR and other concurrent RWF CIP construction projects.

Scenario 2: Background plus Project Conditions - Scenario 1 volumes plus construction traffic generated by the Project

Table 2-3 summarizes the LOS calculations conducted for the study intersections to evaluate their operations under background with and without the Project Conditions. As can be seen from the table, the effect of the Project construction activities on LOS would be negligible and the Project-level and cumulative intersection impacts would be less than significant.

Operation and maintenance activities associated with the Project would also have a negligible effect on traffic. As discussed in the Project Description, most of the Project involves upgrades to existing facilities and increases in plant operations staff would not be necessary. Additionally, the Project would not block, interfere with, or congest any existing pedestrian or bicycle paths, and similarly would not interfere with any mass transit systems. Therefore, the Project is not anticipated to conflict with any applicable plan, ordinance, policy, or congestion management program with respect to traffic or circulation, or non-motorized travel.

**TABLE 2-3. BACKGROUND AND BACKGROUND PLUS PROJECT
INTERSECTION LOS**

Intersection	Peak Hour	Background		Background Plus Project			
		Delay ¹	LOS ²	Delay ¹	LOS ²	Δ Crit. V/C ³	Δ Crit. Delay ⁴
1. Zanker Road / SR237 WB Ramps	AM	13.3	B	13.9	B	0.050	0.6
	PM	17.4	B	17.6	B	0.010	0.5
2. Zanker Road / SR 237 EB Ramps	AM	15.8	B	16.1	B	0.014	0.5
	PM	15.7	B	16.0	B	0.024	0.3

Notes:

1. Whole intersection weighted average stopped delay expressed in seconds per vehicle for both signalized intersections using the 2000 Highway Capacity Manual (HCM) methodology via the TRAFFIX 8.0 software, with adjusted VTA parameters to reflect Santa Clara County Conditions.
2. LOS = level of service.
3. Change in the critical volume-to-capacity ratio (V/C) between Background and Background plus Project Conditions.
4. Change in critical movement delay between Background and Background plus Project Conditions.

Source: Fehr & Peers, June 215

3) **No Impact.** The Project provides for a replacement flare and new exhaust stack for the odor control facility both of which will be about 40 feet in height and comparable to existing structures and facilities. These proposed facilities would not be located in the proximity to an existing airport. The Project will have no impact relative to air, rail, or water-borne traffic patterns.

4) **No Impact.** The Project would not install any new public access roadways, nor would it alter any public access roadways. Additionally, the Project would not introduce an incompatible use (i.e., such as agricultural use) to area roadways. Therefore, potential hazards associated with such conditions would be avoided.

5) **No Impact.** The Project would not block or interfere with, temporarily or permanently, any emergency access route. While the Project would result in additional construction-related trips, these would be limited in extent and would only occur during the construction period.

6) **Less than Significant Impact.** There is a Class I bicycle path that extends south of and parallel to SR 237 starting at the Zanker Road / SR 237 westbound ramp intersection and heading west. There are Class II bicycle lanes provided on Zanker Road, south of the SR 237 eastbound ramp intersection. In June 2012, an additional Class I bicycle path was constructed near the RWF site. This path lies north of and parallel to SR 237, starting at the Zanker Road / SR 237 westbound ramp and continuing east toward the northern stretch of Coyote Creek Trail / Bay Trail.⁵ Project construction would be limited in extent to an area that is not generally accessed or utilized by the public, including pedestrians, bicyclists, or persons utilizing public transit. While construction-related truck trips could cause a minor increase in use of access roads, these would not interfere with pedestrian, bicycle, or public transit. The impact is less than significant.

Mitigation Measures

None required.

Q. UTILITIES AND SERVICE SYSTEMS

SETTING

Non-residential waste within the city may be disposed of at any of four privately owned landfills in San Jose. These facilities include the Newby Island Sanitary Landfill, Zanker Road Landfill, Zanker Material Processing Facility, and Guadalupe Landfill. Disposal may also occur at other landfills outside the county. According to CalRecycle and Santa Clara County's 2012 five-year countywide integrated waste management plan review report, the county has adequate disposal capacity (i.e., greater than 15 years).^{36,37}

The City Council adopted a Zero Waste Resolution (No. 74077) in October 2007 which set a goal of 75 percent waste diversion by 2013 and a goal for the city of zero waste by 2022. To support this resolution, the City ESD prepared the Integrated Waste Management Zero Waste Strategic Plan in November 2008. Amongst the various goals of the Plan was to enhance construction and demolition debris recycling.

The RWF provides primary, secondary, and tertiary treatment of wastewater and has the capacity to treat 167 mgd average day weather influent flow. The RWF is the largest tertiary treatment plant in the western United States and provides secondary and tertiary treated wastewater to support local recycling efforts.³¹

IMPACT ANALYSIS

Control Measures Incorporated by the City

- Q1. Contractor shall utilize RWF reclaimed water for general construction needs if determined to be feasible and cost-effective.
- Q2. Contractor shall recycle demolition products and construction debris to the extent feasible, and remove from the work site all remaining materials and dispose of in accordance with all local laws, codes, and ordinances.
- Q3. Implement Control Measures F7 and H3 for disposal of contaminate/hazardous materials.

Significance Criteria

RESOURCE CATEGORY / SIGNIFICANCE CRITERIA	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Information Sources
Q. UTILITIES AND SERVICE SYSTEMS					
Would the Project:					
1) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11
2) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11
3) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11
4) Have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	11
5) Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11
6) Be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	11
7) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	11

Discussion

1) **No Impact.** The Project would not generate any wastewater during construction or operation and would not conflict with any applicable RWQCB requirements for wastewater treatment. See Section F and I for a discussion of stormwater and stormwater quality. No impact would occur.

- 2) **No Impact.** The Project is a major expansion of the anaerobic digestion process at the RWF. It does not require the construction of new water or wastewater treatment facilities.
- 3) **No Impact.** All drainage from the Project area and the main processing area of the RWF is returned to the plant headworks from where it undergoes treatment with raw wastewater. No new stormwater facilities are required.
- 4) **Less than Significant Impact.** The Project would require negligible water during construction and operation. Control Measure Q1 requires the Contractor to use RWF reclaimed water for general construction needs if determined to be feasible and cost effective. The impact is less than significant.
- 5) **No Impact.** The Project would not generate wastewater and would not require additional wastewater treatment capacity.
- 6,7) **Less than Significant Impact.** The Project would generate various demolition- and construction-related waste and debris. This would include such items as mechanical equipment and piping, concrete and asphalt, wood wastes, metals, plastics, and various other materials. Operation would generate limited solid wastes associated with maintenance of the proposed facilities.

Control Measure Q2 has been incorporated into the Project requiring the Contractor to recycle demolition products and construction debris to the extent feasible, and remove from the work site all remaining non-recyclable materials and dispose of in accordance with all local laws, codes, and ordinances. Sufficient capacity exists in local facilities to accommodate the Project's solid waste disposal needs. In addition, Control Measure Q3 (see Control Measures F7 and H3) will be implemented for disposal of contaminated/hazardous materials. The impact is less than significant.

Mitigation Measures

None required.

R. MANDATORY FINDINGS OF SIGNIFICANCE

IMPACT ANALYSIS

Control Measures Incorporated by the City

None.

Significance Criteria

RESOURCE CATEGORY / SIGNIFICANCE CRITERIA	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Information Sources
R. <u>MANDATORY FINDINGS OF SIGNIFICANCE</u>					
1) Does the Project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	11
2) Does the Project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	11
3) Does the Project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	11

Discussion

1) **Less than Significant Impact.** The Project area is within the central portion of the RWF main operations area which is highly disturbed and subject to ongoing construction, operation, and maintenance activities. The Project will have no effect on habitats, fish and wildlife populations, plant or animal communities, or the range of these species. As discussed in Section D), Biological Resources, there is a remote chance that bird nests protected under the federal Migratory Bird Treaty Act and State Fish and Game Code could be affected by

construction along the southern edge of the APE, but appropriate mitigation measures are included to reduce this impact to less-than-significant levels.

2) **Less than Significant Impact.** The main areas of potential cumulative impacts relate to air quality (Section C), noise (Section C), and traffic (Section P). Priority pollutant thresholds of the BAAQMD for construction emissions are a measure of both Project and cumulative impacts. As the Project's construction and operational emissions are below these thresholds, cumulative impacts are less than significant. The noise analysis considered the potential effects of other Plant Master Plan projects whose construction schedules overlap the Project's schedule. However, the RWF has not received any noise complaints in the past due to construction or operational activities and the distance to the nearest sensitive receptors (0.9 miles to the west) will serve to attenuate noise generation within the plant's main processing area, resulting in a less than significant cumulative noise impact. The traffic analysis compared the Project's contribution of construction traffic to Background Conditions which included traffic from approved but not yet built or occupied developments near the Project site and other concurrent Plant Master Plan construction projects (see Table 1-2 and Figure 1-7 in Chapter 1, Introduction and Project Description). The Project's contribution of construction traffic at the two intersections evaluated was determined to be less than significant on a Project-level and cumulative basis.

3) **Less than Significant Impact.** Worker and public health and safety were discussed in various sections of this IS, including air quality, geology and soils, hazards and hazardous materials, noise and vibration, and transportation/traffic. In all instances, specific control measures have been included in the Project to result in the impacts to worker and public health and safety to be less than significant. It should be noted that an important component of the Project is the construction of an external, elevated pipe rack to collect digester gas from the entire digester campus. This will allow removal of low-pressure gas piping and some other hazardous systems from the RWF tunnel system which does have worker access. This is a beneficial worker health and safety impact.

Mitigation Measures

None required

CHAPTER 3

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